



**SOUTHERN
REPRODUCTIVE**
Trusted Animal Services



Instruction
manual

AlphaVision



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Certification

Hereby, IMV imaging (UK) Ltd, declares that the radio equipment type AlphaVision WiFi is in compliance with Directive 2014/53/EU.



Agência Nacional de
Telecomunicações

"Este equipamento não tem direito a proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados."



Preamble

This user manual is intended to serve as a reference guide on how to install and operate IMV imaging products.

Every effort has been made to ensure the reliability and accuracy of the information contained in this user manual at the time of going to press. However, the specifications and procedures may undergo changes owing to our ongoing efforts to respond to our customers' demands and maintain a process of research and development and continuous improvement for all IMV imaging products.

IMV imaging reserves the right to make changes to the specifications and procedures relating to its products and the related documentation at any moment and without prior notice. The information contained in this user manual is considered to be reliable and exact with regard to IMV imaging products.

IMV imaging has taken all reasonable precautions in preparing the information contained in this User Manual, but does not guarantee that this information is free from error. IMV imaging assumes no liability for damage incurred by the user owing to errors or omissions coming from the information contained in this document.

IMV imaging cannot be held responsible and assumes no liability for losses incurred by the user or by third parties resulting from the incorrect installation, operation or maintenance of the system in cases where procedures and specifications have not been correctly followed. It is therefore essential that the user follows the specifications, procedures and recommendations described in this user manual.

Before using an IMV imaging product, please confirm the latest information on the product with an IMV sales representative. Similarly, please pay regular and ongoing attention to additional information that IMV imaging may issue, such as that published on our website.

The warranty on IMV imaging products will not apply in the following situations:

- The equipment was repaired using non-genuine parts.
- The consumable used with the equipment was not approved by IMV imaging and could damage its products.

Refer to sections of this manual for additional information on the equipment warranty.

IMV imaging configures its products in a standard mode that may differ from the user's specific conditions. To ensure that IMV imaging products and

environment of the user-specific situation must be qualified by the final user under their own responsibility by ensuring that the final product complies with their individual specifications. IMV imaging cannot be held liable in any way for the performance levels (i.e. fertility, prolificacy, etc.) resulting from the use of the final products marketed by the customer.

Please use IMV imaging products in accordance with all the applicable regulations and laws. IMV imaging assumes no liability in the event of damage or loss resulting from failure to comply with the applicable regulations and laws.

Introduction

IMV imaging is the market leader in the development and production of veterinary imaging devices for large animal species.

AlphaVision is designed to assist insemination and reproduction management. It brings the very latest technology in the field of cattle artificial insemination.

Our insemination systems, featuring a sealed HD camera, make working conditions significantly more comfortable. In particular, it enables users to check cervical involution and the presence of mucus in cows and simplifies locating the cervix, making the insemination procedure less invasive it also helps to investigate cervix malformation.

IMV imaging has utilised the latest camera and WiFi technology in AlphaVision to deliver the highest quality image.

Lastly, using the application on the vision terminal, the user can save photos and videos of the cervix. The photo library is also accessible on the terminal, only if it is a phone/tablet - BUGS won't allow this, allowing the user to share the images with a veterinary surgeon to perform any diagnoses required.

AlphaVision is developed in France, engineered and manufactured in Scotland at:

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As specialists in providing imaging equipment for animal husbandry applications, we understand the importance of using reliable equipment. All IMV imaging products are designed and manufactured to withstand the environments in which they are used. However, should you experience any problems with your AlphaVision, our service engineers are available to provide rapid support service and ensure optimum performance. •

Note:

All IMV imaging products are to be used for animal applications only.

A few recommendations to ensure you get the best use from AlphaVision:

- Before each use, read the manual carefully and especially chapter on how to clean the AlphaVision unit.
- Always handle the camera and terminal with the greatest care, particularly during cleaning.
- After using your AlphaVision unit, store it away in its carry case for additional protection.

Overview

ALPHAVISION SYSTEM

SPECULUM ASSY - NO TIP
MEC09-014

SPECULUM ASSY - SOFT TIP
MEC09-013

HANDLE
MEC09-002

CHASSIS

CAMERA

BATTERY
ESG-BATT

KOMBICOLOR GUIDE
MEC09-015



Carry case composition

- 1 AlphaVision fitted with a miniature sealed high definition camera
- 2 extensions for connecting to the Kombicolor insemination gun (MEC09-015)
- 2 speculum tubes : with or without soft tip.
- 1 charger for AlphaVision Battery (ref ESG-CHARGER)
- 1 bottle of B-LUBE gel (ref. 023917)
- 1 straw cutter (ref. 005233)
- 2 Kombicolor insemination guns (ref. 018398 / 018400)
- 1 Treatment sheath
- 50 Alpha sheaths (ref. 024485)
- 1 Carry case (ref PAK15041)
- 150 sanitary sheaths (ref. 027149)



Kombicolor
insemination gun



Alpha sheaths



Bottle of
B-Lube gel



Straw cutter



Box of sanitary
sheaths

Optional



ref BUG-VGA:GO



Phone holder ACC-CHEST
HARNES



Belt ref ACC-BELT-AV

Activation

Power on

Fit the battery into the dock on the underside of the device and ensure that the battery clip is fully engaged.

To power on the AlphaVision, press and hold the power button for approximately 3 seconds until the power LED comes on. For best results it is

advised that you turn on your AlphaVision as you prepare the accessories and animal(s). This is particularly relevant during the colder months, this helps raise the temperature of the device before it enters the warm humid environment inside the animal. •

Normal start up process

Your AlphaVision can be connected to Android and Apple devices.

To find the app search for 'IMV AlphaVision WiFi' in either the Google Play store or the Apple store and install the app. Launch the app.

1. With the AlphaVision turned on open app on the smart device. The app will request to connect to the AlphaVision. Click OK.

Take pictures and video
Review saved images & videos



Open manual

2. Select AlphaVision from the Wi-Fi page and return to the app by clicking on the arrow on the top of the screen. The app will get the serial number from the AlphaVision.



After a few seconds, the camera image will appear. Touch anywhere on the screen to bring up the menu.

Note: If the Wi-Fi LED is flashing on the AlphaVision it is not connected to any smart device.

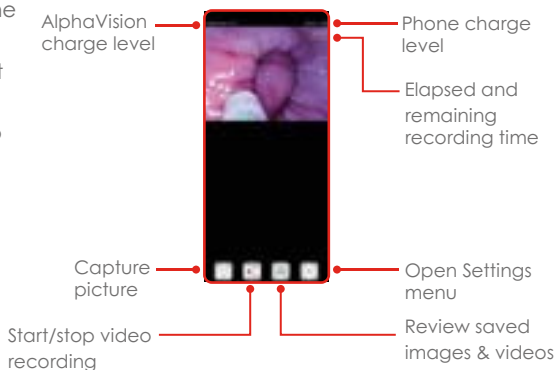
Activation

Live menu

You can capture a picture or video by pressing the relevant icon. If the app is currently recording pressing any of the icons will stop the recording.

Each recording is limited to 60s after which it will automatically stop.

When recording ends the Save Video pop-up will appear. •



Save Video pop-up This menu appears when recording stops, the

meta-data is optional, if entered, it is stored alongside the video as a text file. Selecting "Yes"

will save the video and any meta-data, selecting "Delete " will delete the video.



Activation

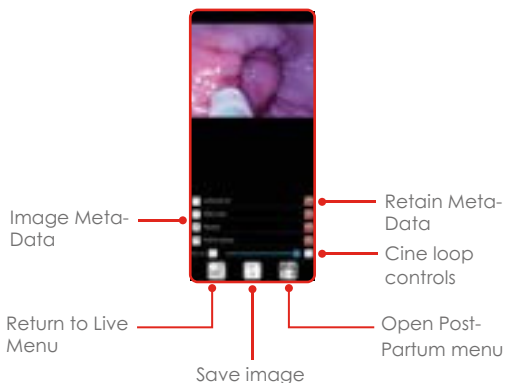
Save Image

Pressing "Return to live menu" will show a prompt asking to exit without saving the image.

The app will not allow an image to be saved unless an Animal ID and Farm name have been entered. Images will be saved with the meta-data embedded, including additional meta-data from the Post-Partum menu and written to the csv file. If

the lock icon is red then the meta-data will be retained after returning to the live scan, otherwise it will be reset. Changing the Animal ID automatically resets the meta-data.

The cine loop stores the previous 100 frames of videos, the controls can be used to move through the loop to find a particular image.



Post-Partum menu. Additional meta data can be entered in this menu. This data will also be embedded in the saved image and written to the csv file. Selecting

"OK" will save the meta-data, selecting "Cancel" will reset the values without saving the data.



Review Data

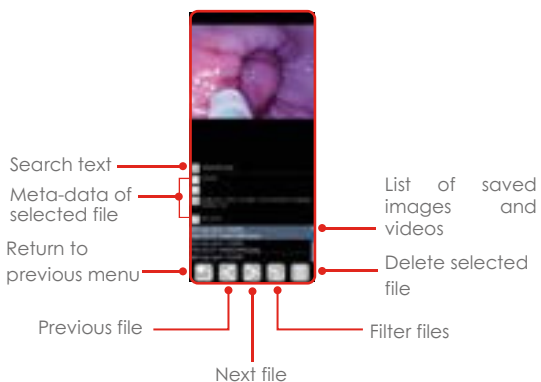
Any previously saved images and videos can be viewed by selecting from the list.

Any meta-data associated with the file will be displayed.

If text is typed in the search box, only images and videos which contain that text will be visible in the list. The app searches the file name and any meta-data for the text.

The Filter button changes the types of files displayed; Images & Videos, Images only or Videos only. Selecting the delete button will ask if

you want to delete the file before deleting.

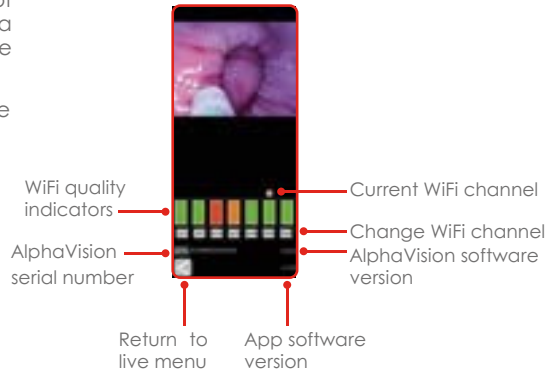


Activation

Settings menu

The WiFi quality indicators show the availability of the WiFi channels. If the AlphaVision is not using a channel that is green, there is a greater chance of interference.

To change to a different channel, press one of the grey channel buttons, the app may disconnect from the AlphaVision and require a manual re-connection.



Data saving and upload

Images and videos are saved to the device's gallery, the csv files are also stored here. If there are stored data files and the app is connected to WiFi when it is opened, then the app will prompt to upload the images to the IMV server.

Once the images are uploaded, they are moved to a different folder (IMV_AlphaVision_Uploaded) and are no longer visible in the Review data menu.

System update

The app automatically checks the IMV licence server for scanner software updates when connected to Wi-Fi.

After connecting to an AlphaVision you may be prompted to update the software. The AlphaVision will only update if the battery is above 50% charge.

Press OK or Cancel. Pressing OK will cause the AlphaVision LEDs to flash yellow - it will take roughly two minutes to update. Press cancel if you wish to update later.

Once the update is finished the AlphaVision will switch off. The AlphaVision software version number can be checked in the User Settings section

Operating instructions

LED indicators

The AlphaVision has 2 LEDs on the front keymat. •

LED sequence	Power LED	Wi-Fi LED	AlphaVision
Blue Flashing	Device turning on		searching for available viewing device
Blue	Device on and battery between 66-100% charge		Connected to AlphaVision
Yellow	Device on and battery between 33-66% charge	- -	
Yellow flashing	Device on and battery between 0-33% charge		
Both LEDs flashing Yellow	Updating Firmware		Updating Firmware



Buttons

The AlphaVision has 2 buttons on the keymat. Power button - one long press (2-3 seconds) will turn the device on. Repeat this to turn the device off. Image and video capture button - A single press will take an image. A longer press will start a video capture, a further single press after this will stop the video capture. Images and videos can only be saved if a tablet or phone is connected to the AlphaVision. •

Factory reset

Your AlphaVision can be reset to factory firmware settings in the unlikely event the device fails. This will take a few minutes and the scanner will then switch off – removing the license from the AlphaVision Wifi. Hold down the power and Image capture buttons until both LEDs glow yellow and release.

Operating instructions

Charging

The battery can be charged in the charging dock, powered by a standard outlet. The charging dock can also be connected for in-car charging when using the ACC-DC LEAD accessory.

A fully discharged battery should be fully charged within 5.5 hours. While in a good condition, the battery run time will be 7 hours. The Li-ion cells used in the battery pack do not suffer from the 'Memory effect'. For optimal battery longevity, avoid letting the battery run completely down and recharge at approximately 20°C/68°F.

Electrical connection to the power pack is through the gold pads on the battery and the AlphaVision. Power pack output is protected but care should be taken to prevent short circuiting the gold connector pins and pads. •



Warning:

To reduce the risk of burns, fire, electric shock or injury to persons an appliance should never be left unattended when plugged into mains or 12 V cigarette lighter.

LED sequence	
One Blue Flashing	Charging, charge level below 33%
First LED solid blue Second LED flashing blue	Charging, charge level below 66%
First and second LEDs solid blue Third LED flashing blue	Charging, charge level below 100%
All LEDs solid blue	Fully charged
All LEDs flashing yellow	Temperature is too high (more than 45°C/113°F) for safe charging
All LEDs flashing blue	Temperature is too low (less than 0°C, 32°F) for safe charging

Operating instructions

Operator safety

When using viewing devices in combination with your Alphavision and working with animals please be aware of your own spatial environment to avoid colliding with unseen objects.

For best results we recommend pairing the Alphavision with IMV imaging's BUGs heads up display goggles. The BUG VGA:Go goggles are specifically designed for use in the field providing excellent image visibility whilst maintaining full peripheral vision to ensure the user remains safe in their environment and keeps both hands free to work. •



Fitting the handle

To fit the handle it should be rotated into the 'keyhole' shaped hole. Once rotated to the point where the handle is parallel to the lower section of the chassis it should 'click' into place and feel secure. •



Fitting the speculum

Fit the speculum to the AlphaVision chassis. It should 'click' into place.. •



Operating instructions

Fitting the sanitary sheath

Your AlphaVision comes with a roll of sanitary sheaths. These are designed to protect your device against heavy soiling as well as help maintain a clear image on the camera when you need it most.

1. Always work with a dry speculum. Wipe carefully with a paper towel between uses.



2. Pull the sanitary sheath from the box.



3. The sanitary sheath needs to be orientated correctly with the wider section at the handle end of the AlphaVision.

4. If possible moisten your fingers in order to separate the two sides of the sheath.



5. Slide the sanitary sheath over the speculum.



Warning:

Do not wind the sheath around the speculum; this will trap the sheath and make it difficult to open.



Operating instructions

Checking the cervix

1. Clean the animal's vulva using the same protocol as with a standard insemination.

2. Put B-LUBE gel on the end of the speculum over approximately the first 10cm.



3. Part the vulva. Position the end of speculum against the vulva. Point the camera upwards at a 45° angle.



4. Gently insert the speculum, aligning it parallel to the vagina.



5. Once it is 10cm inside the vagina pull back on the sanitary sheath to open it at the front.



6. Progress towards the cervix using the image displayed on your viewing device to navigate.



7. Check the condition of the cow's cervix on the image

Now you should be able to make a diagnosis or a decision on insemination. If insemination, proceed with the next steps.

Operating instructions

Preparing the straw and Kombicolor

1. After thawing and drying out, cut the welded part of the straw with the straw cutter supplied.



2. Insert the straw into the Kombicolor shaft.



3. Insert the Alpha sheath into the Kombicolor until it is fully locked.



4. 'Click' the Kombicolor gun into the Kombicolor guide.



5. Slide the Kombicolor guide into the AlphaVision handle up to the second notch. •



Operating instructions

Insemination

- 1.Repeat the same steps listed previously on 'checking the cervix'.
 - 2.Slide the Kombicolor guide into the AlphaVision handle up to the second notch.
 - 3.Push the Kombicolor guide until the insemination sheath appears on the image at the entrance to the cervix. 4.Insert the sheath by continuing to push the
- Kombicolor guide. 1 notch or 'click' is equal to 1 cm.

Warning:
Do not force it!



- 5.Check that the end of the insemination syringe is positioned correctly by rectal palpation. If the tip of the sheath is still in the cervix, move the cervix to help progress the sheath through it.
- 6.Inseminate by gently pressing the plunger of the Kombicolor. Be careful not to move the Kombicolor guide.



- 7.After completely emptying the straw withdraw the AlphaVision device slightly.
- 8.Check the entrance to the cervix to ensure that no semen flows back. •

Dismantling the device

1. Remove the AlphaSheath and the insemination straw by pulling forwards so as not to soil the inside of the AlphaVision.



2. Remove the Kombicolor guide from the handle and pop the Kombicolour out of the guide.

3. Remove the speculum by pressing the two spring plungers.



4. Remove the handle by pressing the spring plunger and rotate the handle out of the chassis. •



Care and maintenance

The AlphaVision is rugged and splash proof; however, it does contain sensitive electronics and optics and so care must be taken in order to preserve its longevity.

The AlphaVision may become damaged if you:

- Drop it
- Hose it down
- Scrape the camera lens. •

Warning:

Do not use alcohol or iodine derivatives.

Maximum water temperature 45°C.



Temperature indicator is white: compliant use

Temperature indicator is black: risk of damaging the device

The AlphaVision must not be stored damp – severe corrosion will result.

Thoroughly dry the device before storage and charging. Take care to detach the external power pack and ensure interconnect areas are dry also.

Cleaning

Please note the following important points:

- The unit is not sealed against jets of water. Water will penetrate the AlphaVision if it is hosed down, rinsed under a fast-flowing tap or submerged.
- The unit is not corrosion proof and should not be left wet. Take care to detach the battery and ensure interconnecting area is dry. The battery charger is not water proof – avoid getting it wet.

To keep your AlphaVision in good condition please follow the below points:

Clean immediately after use with an antibacterial cloth before any debris dries solid. Grit / mud should first be removed by rinsing gently – do not rub the lens.

The AlphaVision and battery can be wiped down with an antibacterial wet wipe, reducing the need for drying. This prevents problems relating to corrosion following wash-down.

The speculum, handle and Kombicolor guide can be immersed in cleaning fluid (e.g. Water & Chlorhexidine). The temperature must be below 45°C.

The AlphaVision can also be cleaned using a cloth, soap and warm water. Sponging down or even brief, shallow submersion is less aggressive than rinsing or hosing down.

Store your AlphaVision in its protective carry case once clean and dry between +5 and +45°C. Do not store at negative temperatures. •

Specifications

Size – 532mm(L) x 67.5mm(W) x 134mm(H)

Weight – 1kg

Mechanical - Aluminium with PC/ABS mouldings and PMMA specula.

AlphaVision operating frequency

B1=2412MHz-2462MHz and B2=5150MHz-5250MHz. Maximum radio-frequency power transmitted in the frequency bands: 16.1dBm for B1 and 18dBm for B2.

To comply with ISED RSS-247, 5150-5250MHz bands are for indoor use only. •

User Output

device using IMV Sound-Link over standard WI-FI connection.

Image and video storage

Storage of images and video clips limited only by available space on smart device linked with AlphaVision.

Smart devices compatibility

Android:

Minimum version: Kit Kat (Android V4.4) Minimum RAM: 2Gb

Minimum Processor: Quad-Core 1.8GHz
Recommended WiFi: 802.11 a/ac (5GHz band)

Apple:

Minimum version: iOS 8

Minimum iPhone version: iPhone 5s Minimum iPad version: iPad4

Warranty

IMV imaging warrants AlphaVision against defects in materials for one year from the date of purchase. IMV imaging does not warrant against normal wear and tear, nor damage caused by accident or abuse. •

Environmental conditions

Temperature range:

AlphaVision: -10°C to 45°C *

Battery Charger: 0°C to 35°C *

Relative humidity: 50% RH max.

Maximum use altitude < 2000m.

Pollution degree: 2

Battery Charger has under and over temperature protection and LED status indication.

* Best charged at 20-25°C, frequent charging at 35 °C / 95 F may shorten battery lifetime. •

Warning:

manufacturer, the protection provided by the equipment may be impaired.

Power and charging

Removable li-ion battery gives 7h runtime.

Battery charge time 5.5h. Only use IMV imaging approved/supplied battery, 12V vehicle power supply, battery charger and DC power adapter.

ESG-CHARGER: Input: 12V, 2A / Output: 4.2V, 2A.

IMV imaging Vehicle Power Outlet/Cigarette Plug Cable (Model: ACC-DC LEAD):12VDC, 2A Fused.

Only to be used when charging from a vehicle supply.

Only replace fuse with 2A medium acting fuse rated to 125V, 10kA breaking capacity (F2A M125V).

DC power Adapter (XP Power, Model: VEP24US12):

Input: 100-240VAC, 0.6A/Output: 12VDC, 2.0A

Battery (Model: ESG-BATT): 3.6Vdc, 6700mAh.

For further information and video manuals about the AlphaVision please visit the "Customer support" section of the IMV website www.imv-imaging.com/international/service-support. •

Service centres

Your AlphaVision does not contain user serviceable parts. Servicing must be done by IMV imaging authorised service centres. Your AlphaVision device is sealed, do not try to take it apart.

Your equipment should be returned periodically to an IMV imaging service centre. Our qualified service engineers will use special test equipment to thoroughly check the instrument and advise of any work that appears to be necessary.

If your AlphaVision requires servicing, please contact an official authorised service centre or the distributor in your country. •



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