



DETAILED DEVICE CHARACTERISTICS

INDEX

Contents:

- ✔ Airtraq SP & Avant (common features)
- ✔ Airtraq SP
- ✔ Airtraq Avant
- ✔ Wi-Fi Camera
- ✔ Phone Adapter

Objective:

- ✔ To acquire a detailed knowledge of the different Airtraq products characteristics

Time Required: 60 to 90 minutes

AIRTRAQ SP | Minimum Mouth Opening (Adults)



King Vision: 18 mm



Glidescope: 18 mm



Macintosh: 17,5 mm



Airtraq SP Small: 15 mm



Airtraq SP Regular: 16 mm



Naso Tracheal: 15 mm



Double Lumen: 18 mm

AIRTRAQ AVANT | Minimun mouth opening



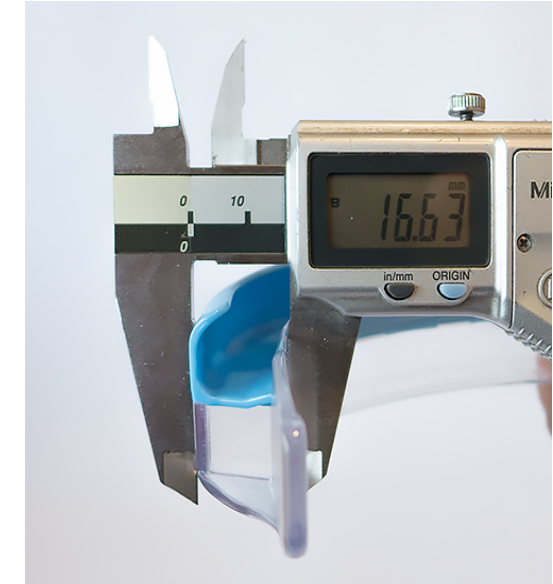
King Vision: 18 mm



Glidescope: 18 mm



Macintosh: 17,5 mm



Airtraq Avant: 17 mm

AIRTRAQ SP- PEDIATRICS | Minimum Mouth Opening



Airtraq SP pediatrics: 12 mm



Airtraq SP infants: 11 mm

AIRTRAQ SP & AVANT (COMMON FEATURES). WEIGHT



McIntosh
435 g



Avant + CAM
326 g



Avant
113 g



Airtraq SP
102 g

AIRTRAQ SP & AVANT (COMMON FEATURES). | Anti Fog system – Warming time

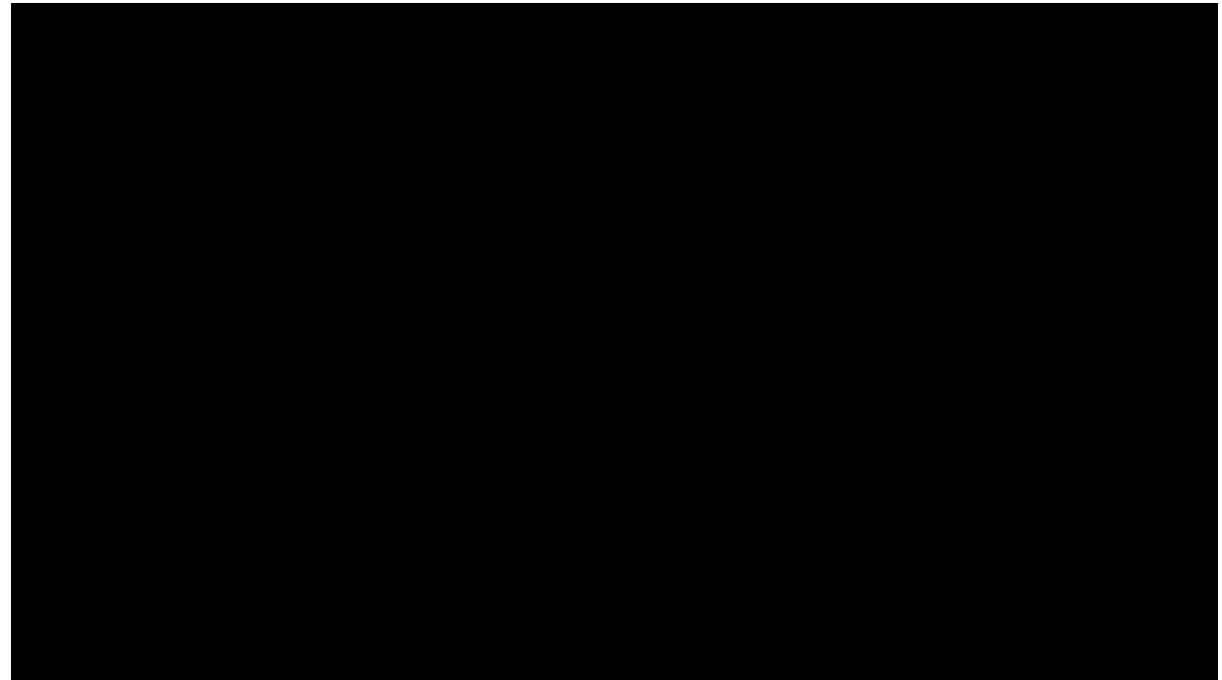
Airtraq never gets fogged because its distal lens is warmed up to human body temperature.

Lens warming starts when Airtraq is turned on, and takes around **30 seconds**.

During warming period, Airtraq **light blinks**.

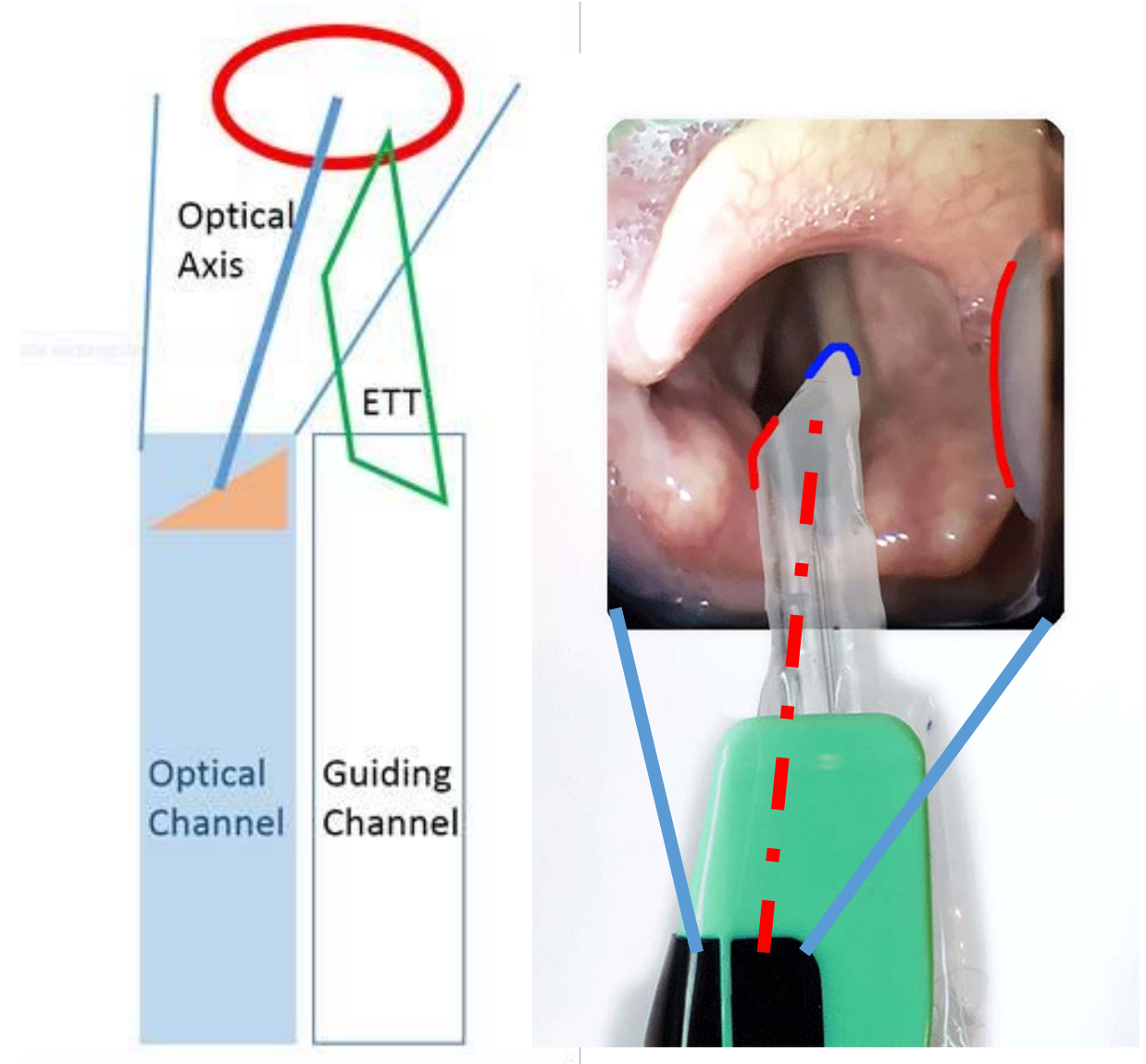
Light becomes steady once body temperature is reached.

In case of emergency it is possible to intubate while the light blinks.



AIRTRAQ SP & AVANT (COMMON FEATURES). Image and ETT Alignment

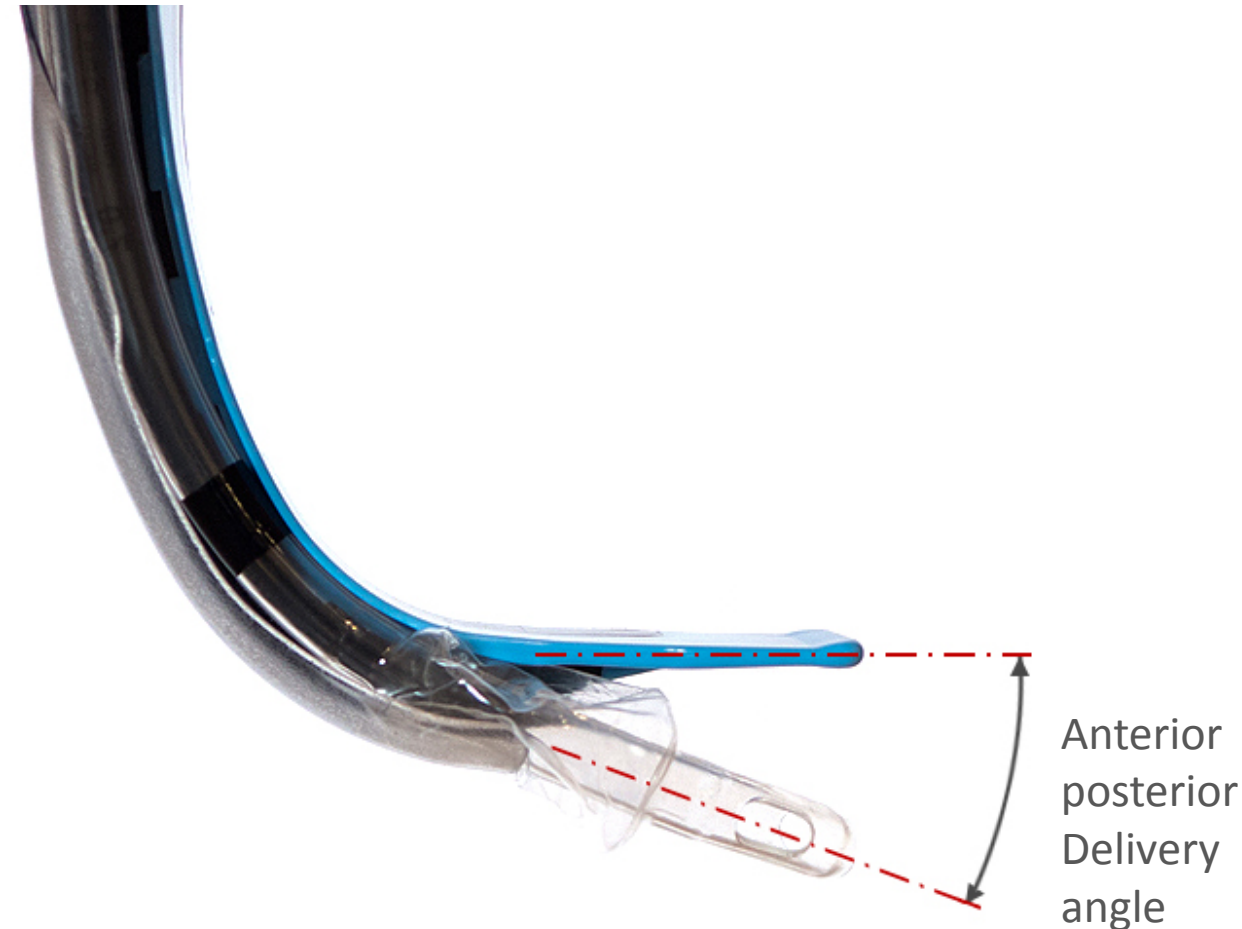
- ✓ Optical Axis points to the center of the Airtraq.
- ✓ Guiding Channel deviates ETT to the center of the Airtraq
- ✓ The user only has to center the vocal cords in the middle of the image and the ETT follows
- ✓ Remember that since the optical duct is at the left of the Airtraq the user sees the left side off the ETT, and that due to the bevel, the ETT's right side is the most forward.



AIRTRAQ SP & AVANT (COMMON FEATURES). ETT Delivery. Considerations

- ✓ Delivery angle of the ETT depends on the combination of:
 - ✓ Airtraq Size
 - ✓ ETT size
 - ✓ ETT type

- ✓ As a general rule a smaller ETT will be delivered more posterior
- ✓ Armoured ETT's will also be delivered more posterior
- ✓ Try to select the Airtraq size recommended for the ETT to be used



AIRTRAQ SP

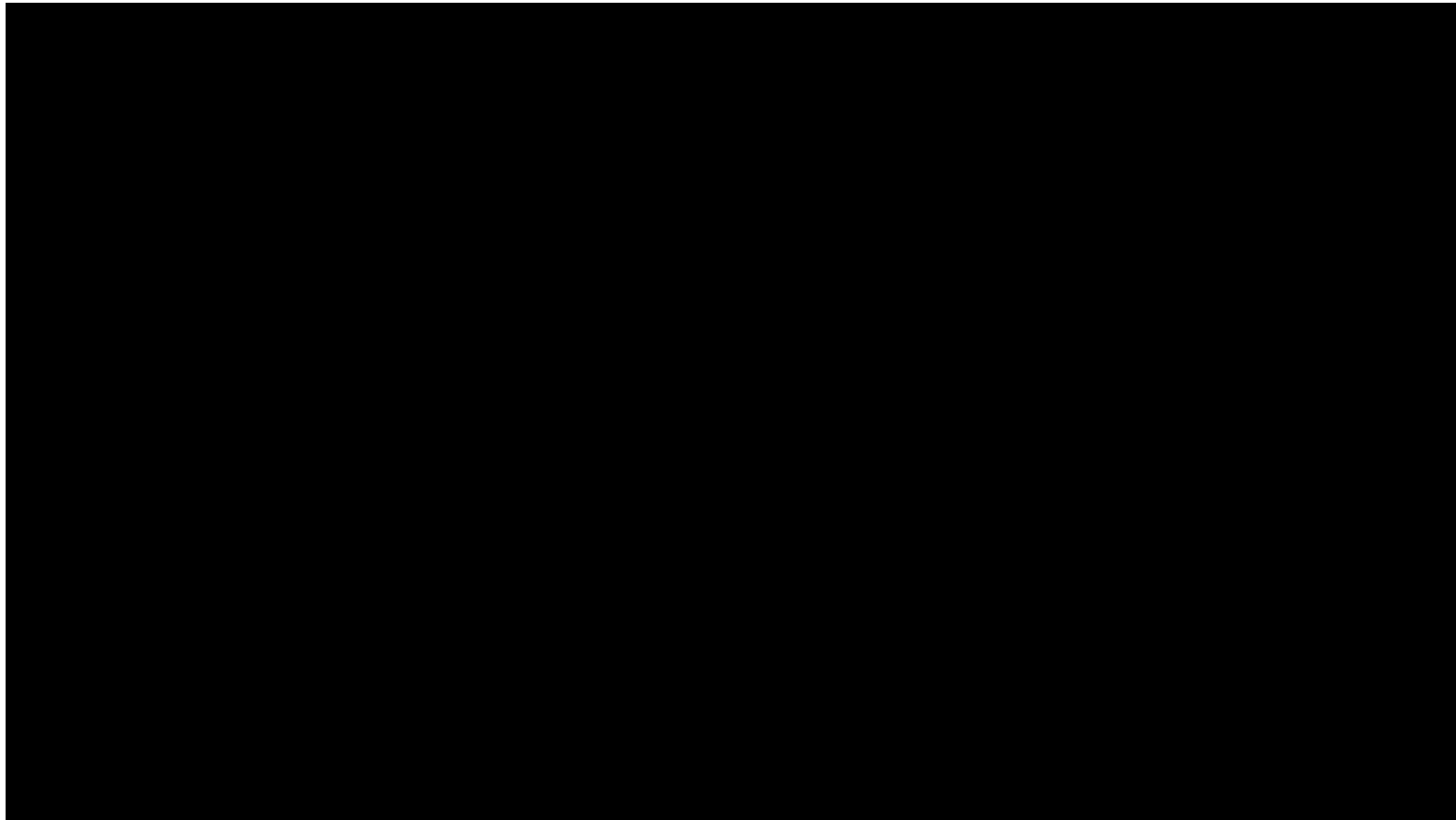


AIRTRAQ SP | How much it last

- ✔ Shelf Life : 3 years
- ✔ Airtraq SP is a Single Patient device. It cannot be sterilized.
- ✔ Maximum accumulated service time : 40 minutes
- ✔ After 35 minutes of accumulated use the Airtraq SP light will blink a few times to indicate that the unit is about to finish. If so, it is recommended to finalize using the unit at the earliest.
- ✔ An Airtraq SP can only be turned on longer than 2 minutes for 4 times
- ✔ If Airtraq SP is finished and it is turned on it will give 10 or 15 flashes and turn off .
- ✔ If Airtraq SP does not light or gives one to five flashes and it turns off it means that the unit has become defective. Discard the unit and contact the Airtraq representative.

AIRTRAQ SP | Disposal

- ✔ Open battery box
- ✔ Remove AAA batteries and recycle them as with other batteries.



AIRTRAQ AVANT

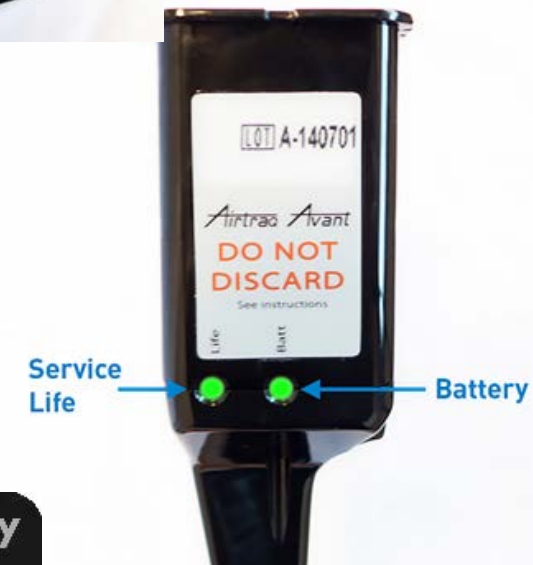


AIRTRAQ AVANT | How much it last

- ✓ **Shelf Life** Optic and Blades : 3 years
- ✓ **BLADES** : Single Patient use. They cannot be sterilized.
- ✓ **OPTIC** :
 - ✓ **Service Life: 50 uses.** It decreases by one usage every time the anti-fog warm up cycle is completed.
 - ✓ **Discard Optic once Service Life is zero.** Once service life is zero there are still 3 cycles left in case of an emergency.
 - ✓ Optics is automatically turned off after 30 minutes. Three minutes before turning off, the light will flash every 10 seconds.
 - ✓ Service life can be checked in LCD display of the Docking Station and also in the Optic's corresponding LED.

The label on the Optics indicates the meaning of the LED color.

- ✓ Steady Green: Service Life > 10 uses
- ✓ Blinking Orange: Service life < = 10 uses
- ✓ Steady Red: Service life = Zero



Life	Battery
● >10	● >25%
⦿ <10	⦿ <25%
● End	● End

AIRTRAQ AVANT | Optics battery charge

- ✓ Each Optics is equipped with a rechargeable battery that powers the LED light and the anti-fog system.
- ✓ The battery must be inserted before use. To insert the battery, remove the Optics battery cover, hold the battery like in the drawing and place it in the battery case in its corresponding position.
- ✓ Battery should be charged using the Docking Station. Make sure that Optic makes full electric contact by checking that LCD displays service life.
- ✓ Optic might also be charged using a standard Battery charger with a mini USB connector.
- ✓ **A fully charged battery will provide power for more than 15 intubations** of 10 minutes. Without use, a fully charged battery will hold 50% of charge after 30 days.
- ✓ Always that the Optic can be turned on a full cycle of **30 minutes is guaranteed**.
- ✓ **Battery charge** can be checked in the Optic's corresponding LED indicator:
 - ✓ Steady **Green**: > 25 % (from **15 to 5 intubations**)
 - ✓ Blinking **Orange**: < 25 % (from **5 to 1 intubations**)
 - ✓ Steady **Red**: Too low (Optics **will not turn on**)

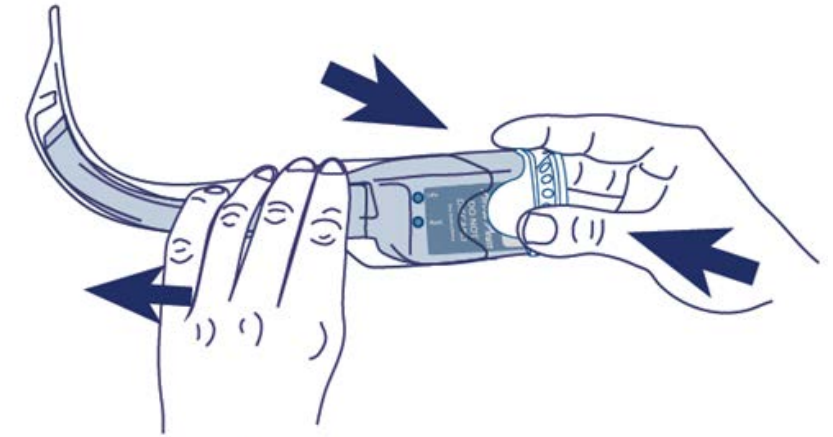


Life	Battery
● >10	● >25%
⚡ <10	⚡ <25%
● End	● End



AIRTRAQ AVANT | Blade and Eyecup disposal

- ✔ Separate the Airtraq Avant Optics from the Blade by firmly gripping both lateral sides of the eyecup and pulling apart. Make sure the Optics do not become in contact with any potentially contaminated surface.
- ✔ The Optics automatically turns off when it is taken out from the blade.
- ✔ Discard the disposable blade and eyecup as any other potentially contaminated waste following local governing ordinances and recycling plans regarding disposal or recycling.
- ✔ DO NOT DISCARD OPTIC before service life is zero.
- ✔ In case that the Optics accidentally become dirty, recommended cleaning is low-level disinfection using clean cotton gauze pads that are saturated with cleaning solution to wipe down the exterior surfaces of the Optics.
- ✔ If needed, place the Optics back onto the Docking Station to recharge the battery.



AIRTRAQ AVANT | Optics Cleaning and Discard when finished

- ✔ In case that the Optics accidentally become dirty, recommended cleaning is **low-level disinfection**.
- ✔ Cleaning: **wipe down the exterior surfaces** of the Optics. Be careful to keep running liquid off the surfaces.
- ✔ The following **Cleaning Solutions** may be used:
 - ✔ Enzymatic Cleaning Solutions (e.g.: ENZOL™ Enzymatic Detergent), Neutral pH soap and water, Sodium bicarbonate solution (8- 10 %).
- ✔ The following **Disinfection Agents** may be used:
 - ✔ Peracetic Acid Solution (0.08%), Isopropyl Alcohol (70%), Solution 70% isopropyl alcohol and 2% chlorhexidine (e.g. Clinell Wipe), Solution Chlorine dioxide (e.g. Tristel Wipe), PDI Sani-Cloth Germicidal Wipes (AF3, Bleach, Plus or Super Sani-Cloth)
- ✔ Blot **dry the Optics** using an individual sterile surgical towel.
- ✔ Caution: Do not autoclave, Do not rinse under running water, Do not soak in liquids, avoid liquid or moisture from going inside the Optics, avoid touching the lens of the Optics.
- ✔ Once the Service Life of the Optic is finished it should be disposed of as follows:
 - ✔ Remove the battery cover by pulling it away from the main body (pull away from the small notches).
 - ✔ Remove the battery from the Airtraq Avant and place it in an appropriate battery recycling container.

Wi-Fi CAMERA



Wi-Fi CAMERA | Battery charge

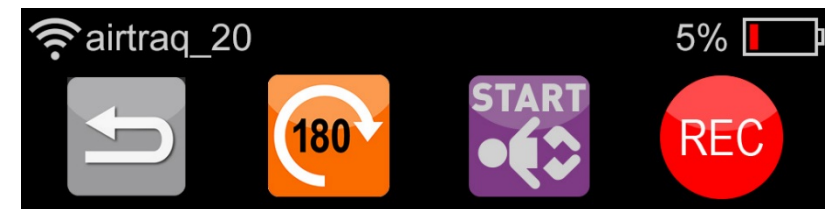
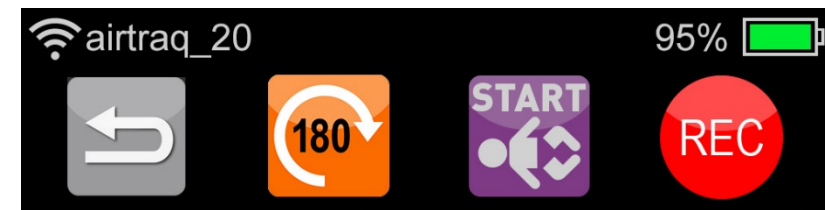


- ✓ The camera does not work when the cable is connected to its mini usb port.
- ✓ Use only charger and cable provided.
- ✓ Using dock station is optional
- ✓ Operating Time (full battery) = 120 min.
- ✓ Full charging cycle = 150 min.
- ✓ Discharge rate when turned off= 6% per day
- ✓ LED`s indicate charge status
- ✓ If screen is open touch it to check charge status
- ✓ Cam will only start if battery is over 10%
- ✓ Battery will probably be empty when delivered to the user



Wi-Fi CAMERA | Battery charge

- ✓ Camera only starts if battery is over 10%. It guarantees that once started it will run for at least 15 minutes.
- ✓ When the A-360 is turned on, an icon and a percentage of charge will appear on the header of the screen showing battery charge status.
- ✓ When in use, if the battery falls below 10% of its capacity the Battery Charge Indicator on the header of the screen and the left charge indicator will become red. The A-360 will continue to operate for approximately 15 more minutes
- ✓ Recording is disabled when battery is below 15%



Wi-Fi CAMERA | Mounting onto Airtraq



- ✔ Slide the lock system into the Open position before inserting Cam into an Airtraq
- ✔ When inserted into an Airtraq Camera turns on automatically on live video
- ✔ Make sure to lock the camera once inserted into the Airtraq

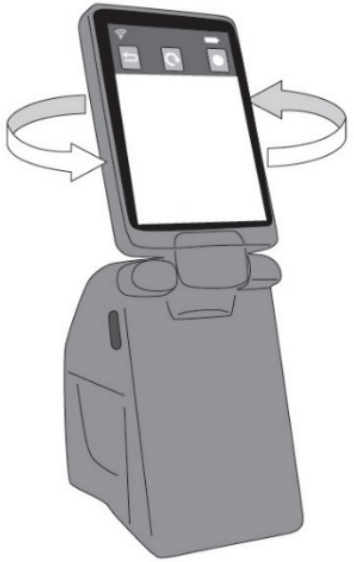
Wi-Fi CAMERA | Turn on and Stand-by

- ✔ To turn **On/Off** press the orange button for 2 secs.
- ✔ Camera will start in Live Video
- ✔ Camera will enter into **Stand-By** after 5 min if there is no user action and it is not in Live Video.
- ✔ To **wake** it press the On/Off button.
- ✔ Camera will **automatically turn off** after 5 minutes in Stand-By mode.

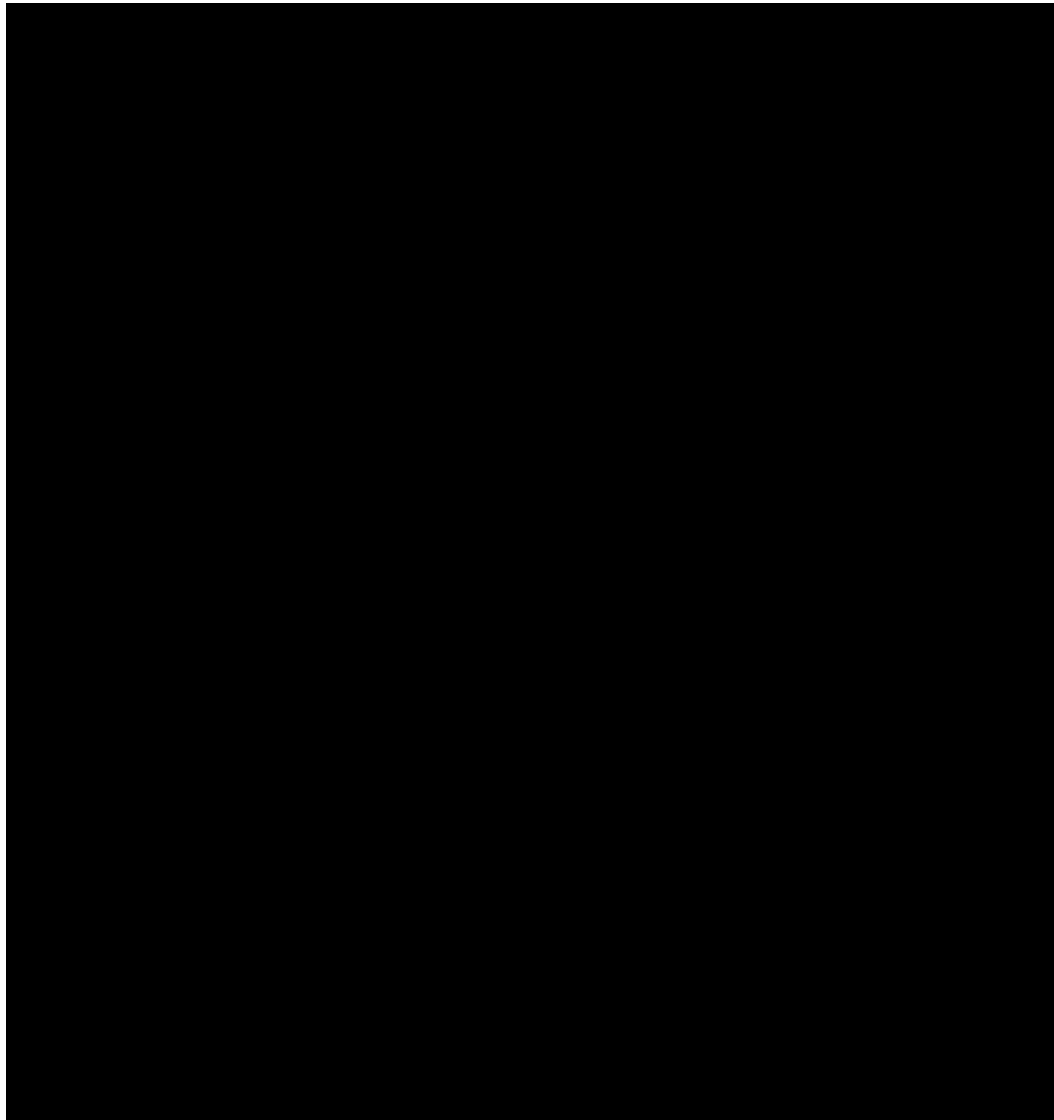


Wi-Fi CAMERA | Screen Flip & Rotation

- ☑ Screen flips and rotates on 2 axis enabling **intubation from any position**



Wi-Fi CAMERA | Screen Flip & Rotation



- ✔ Image can be flipped 180° by pressing the rotate icon

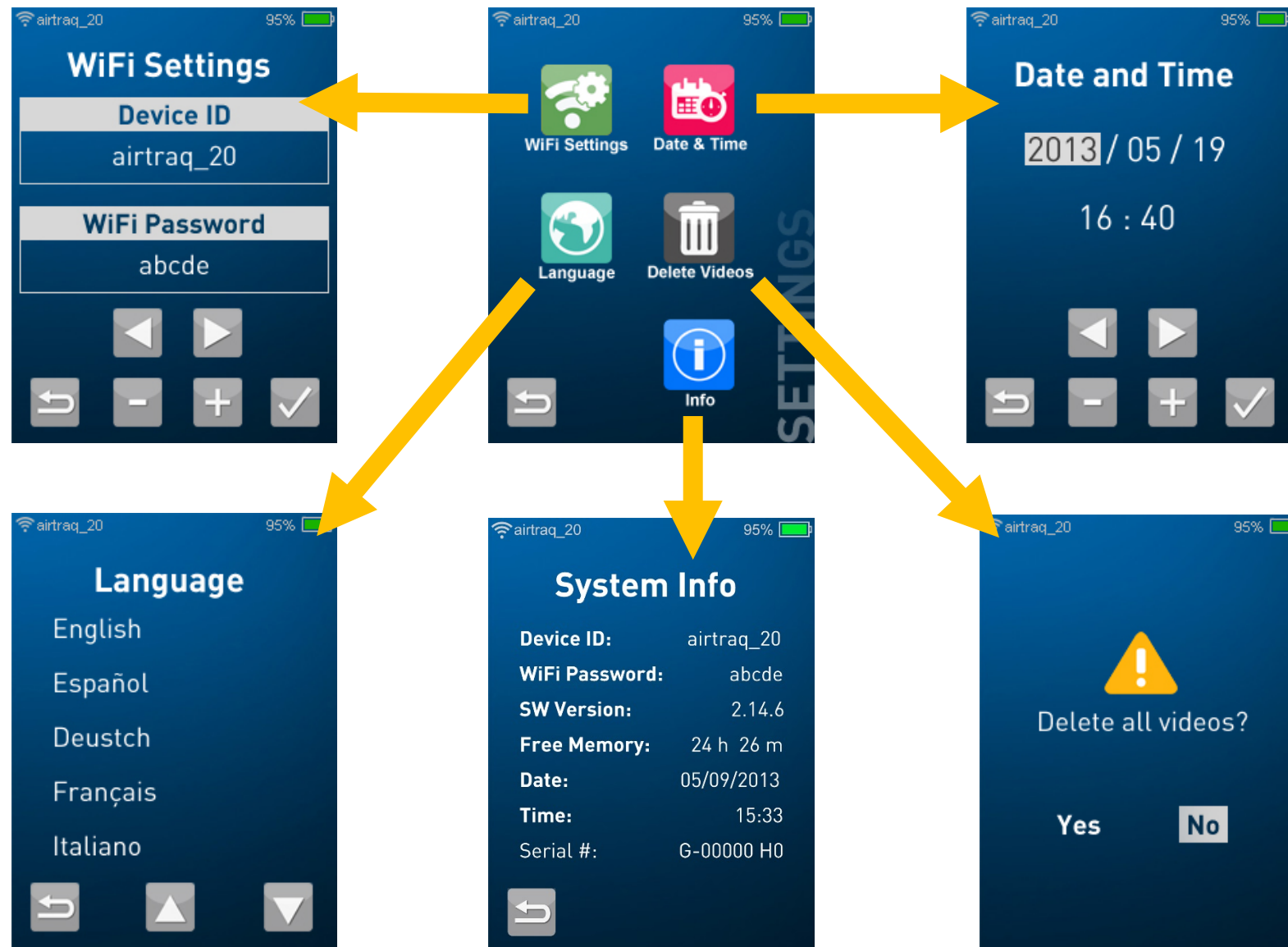


- ✔ Icons should be on the upper part of the screen to see the arytenoid notch on the lower part of the image.

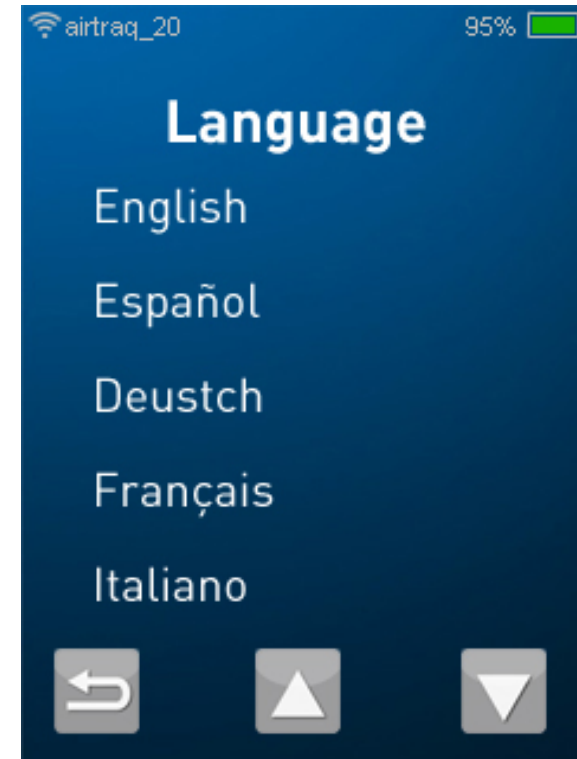
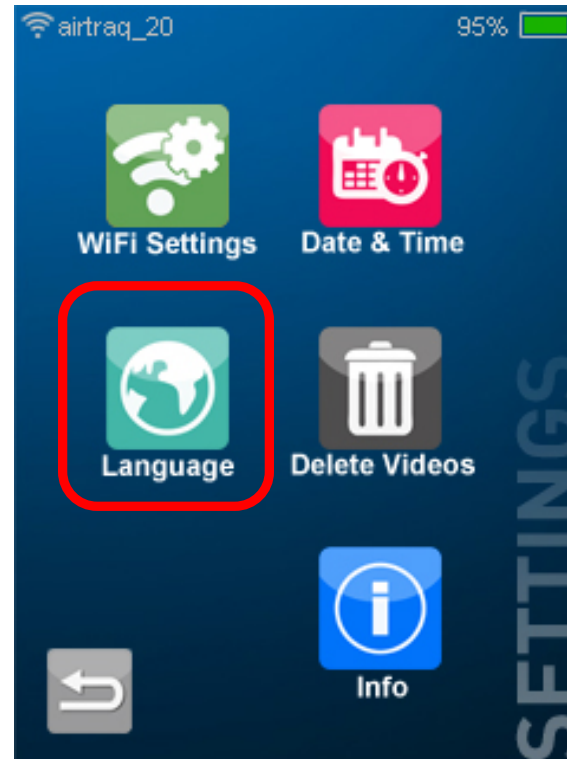
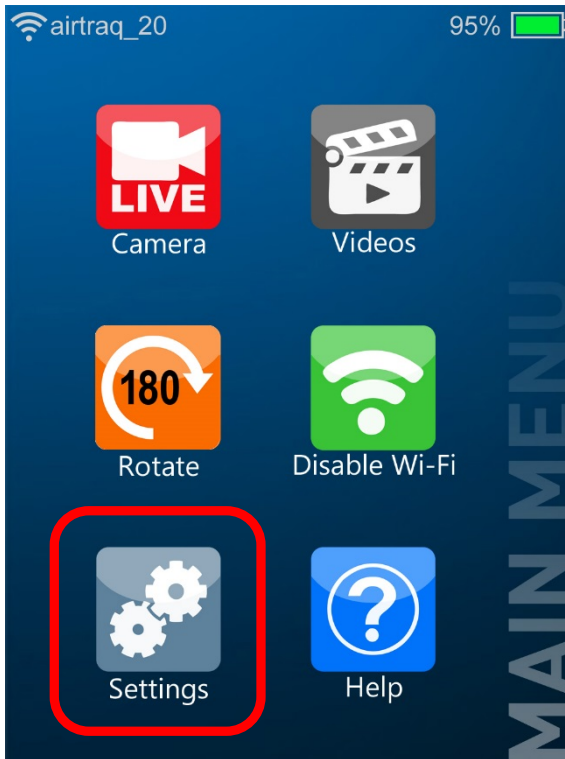
Wi-Fi CAMERA | Menu Navigation / Main Menu



Wi-Fi CAMERA | Menu Navigation / Settings

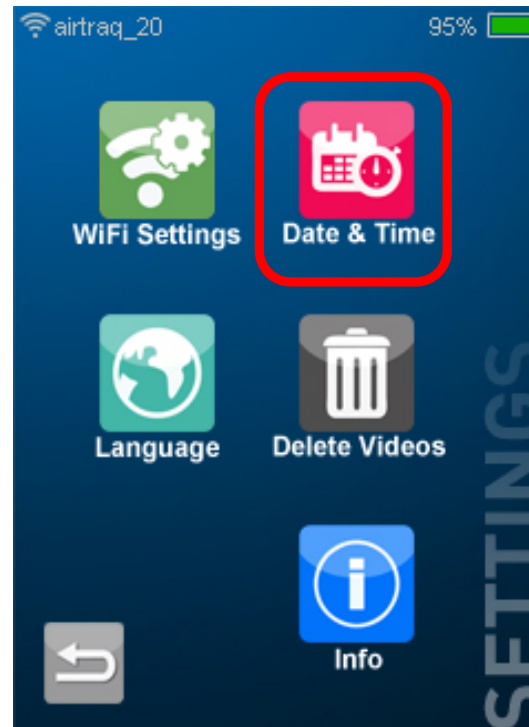
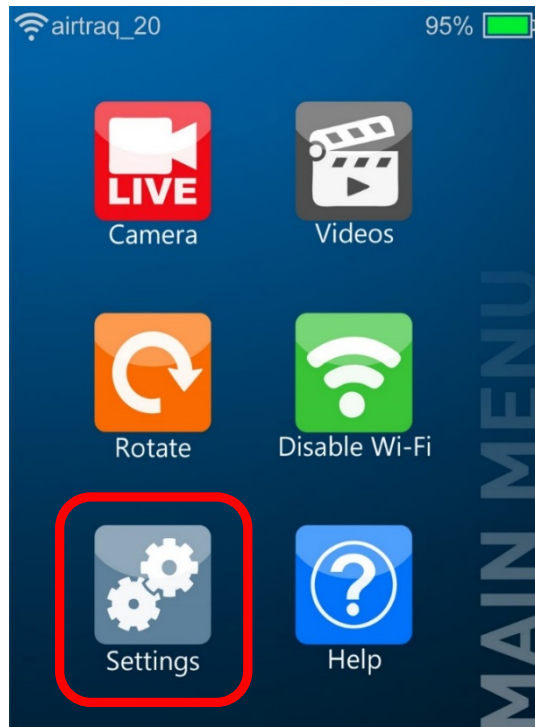


Wi-Fi CAMERA | Initial set-up / Set Language



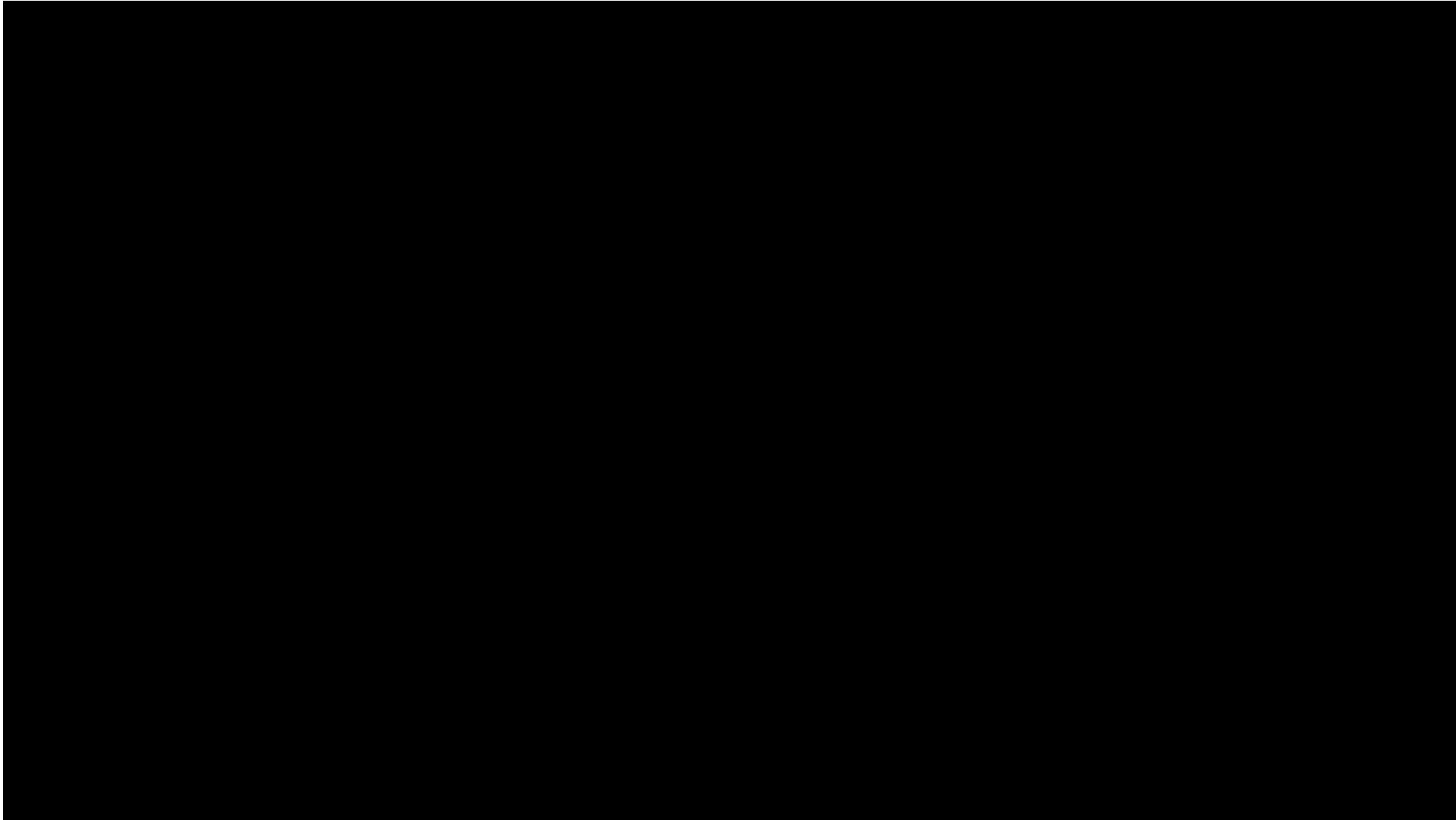
- ✔ Set language selecting from the ones available

Wi-Fi CAMERA | Initial set-up / Set Date and Time

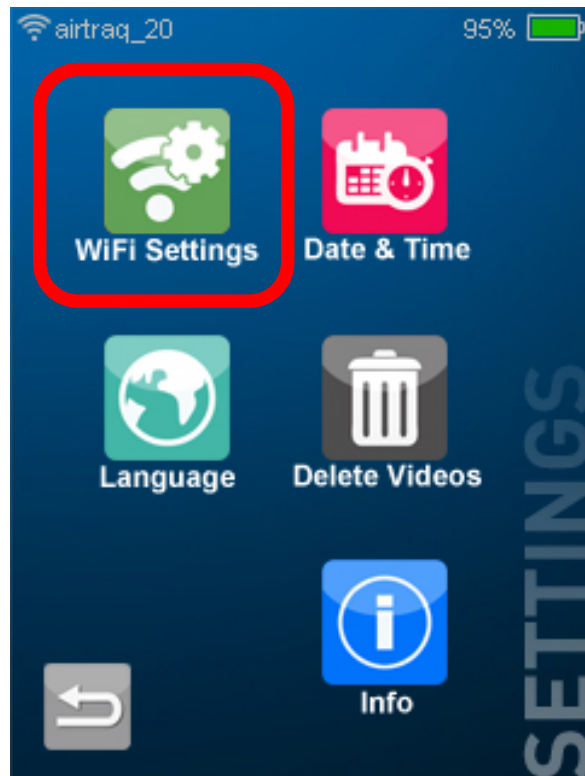


- ✓ Date and time is used to name videos recorded
- ✓ Navigate using Right and Left navigation icons to select the position to be set.
- ✓ Use “+” and “-” icons to select the desired value.
- ✓ Use Confirmation icon to save the date and time selected.

Wi-Fi CAMERA | Set Date and Time

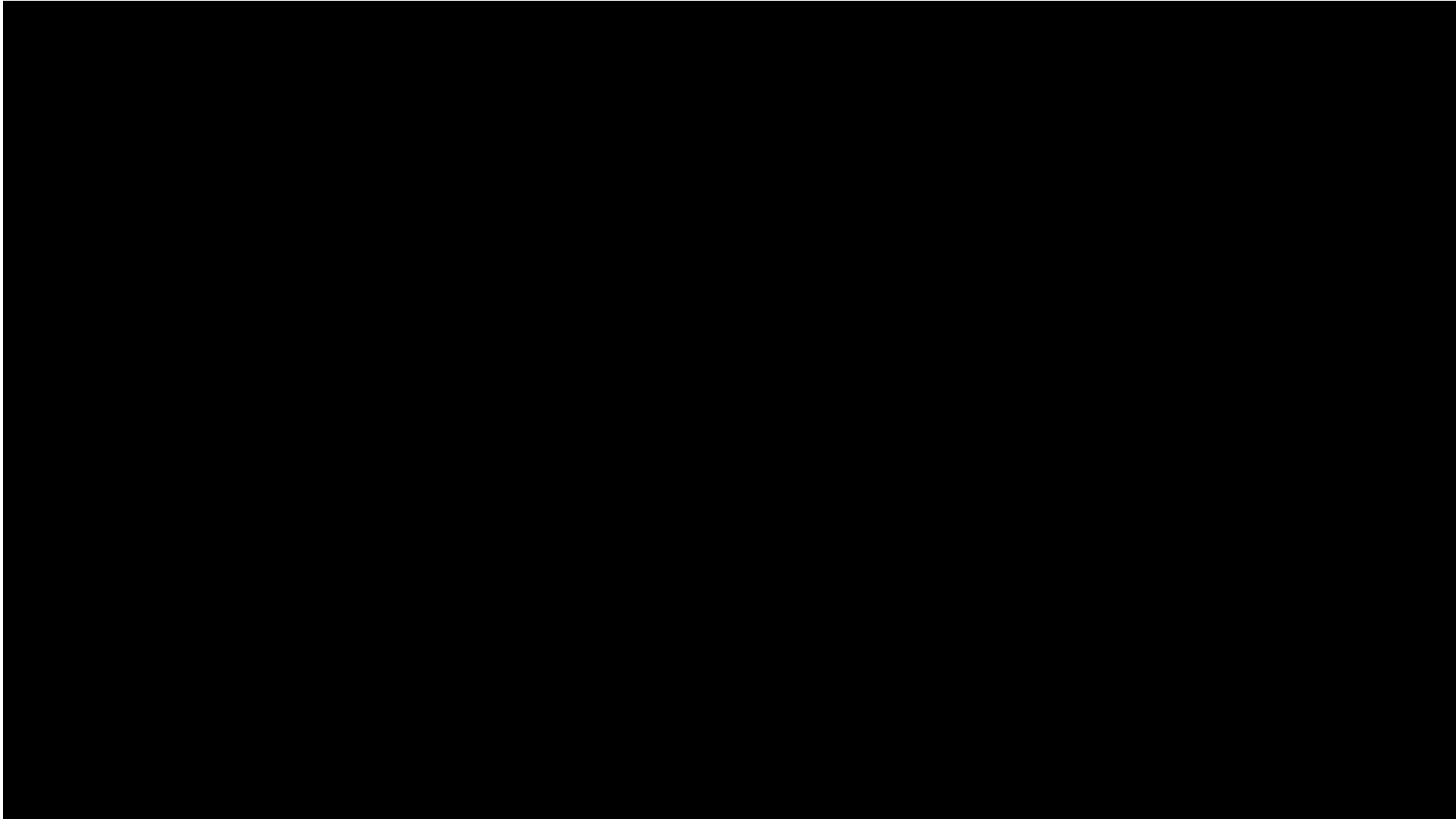


Wi-Fi CAMERA | Wi-Fi settings

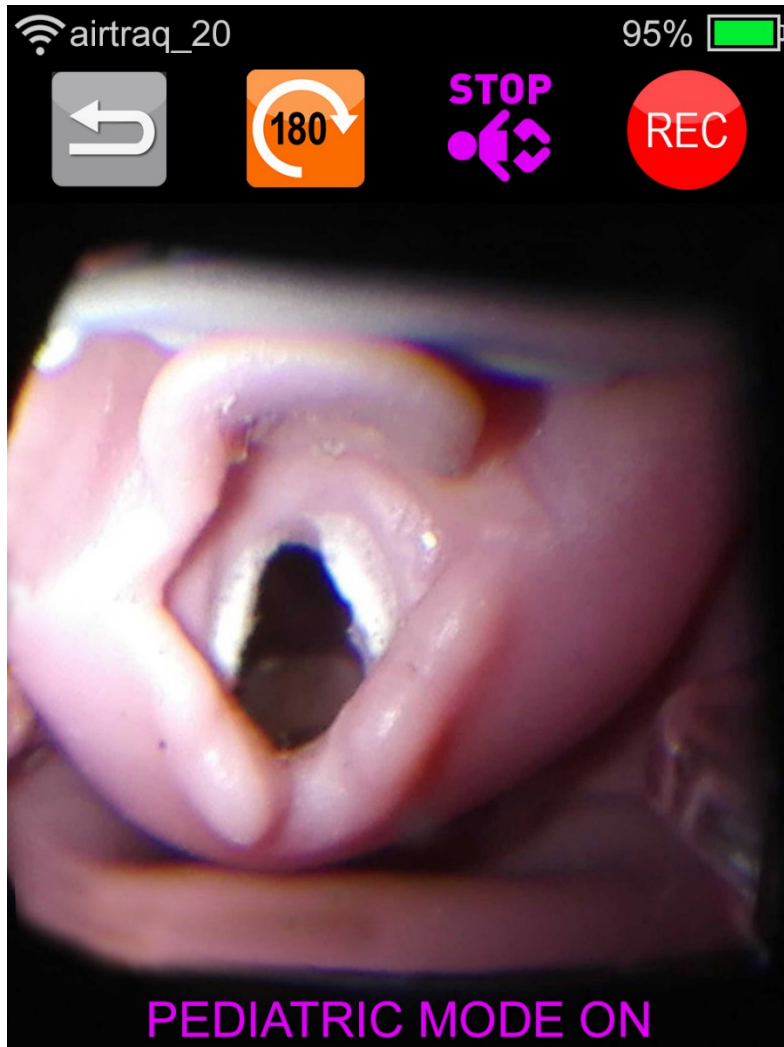




- ✓ Personalize Device ID
- ✓ Device ID will be part of the Wi-Fi identification showed to connect to the camera
- ✓ Change Wi-Fi password
- ✓ Navigate using Right and Left navigation icons to select the position to be set. Use "+" and "-" icons to select the desired value.
- ✓ Use Confirmation icon to save the selection.

Wi-Fi CAMERA | Set Device ID

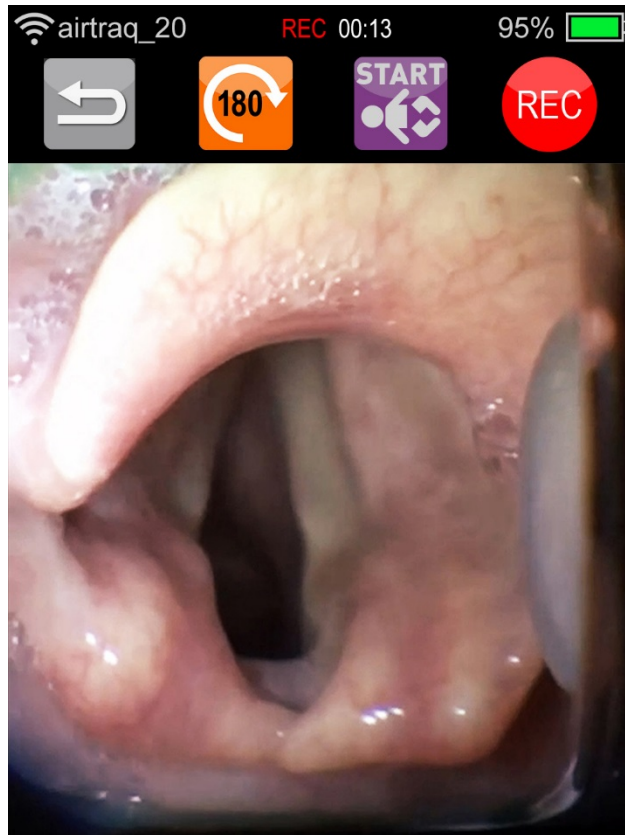




Wi-Fi CAMERA | Pediatric use



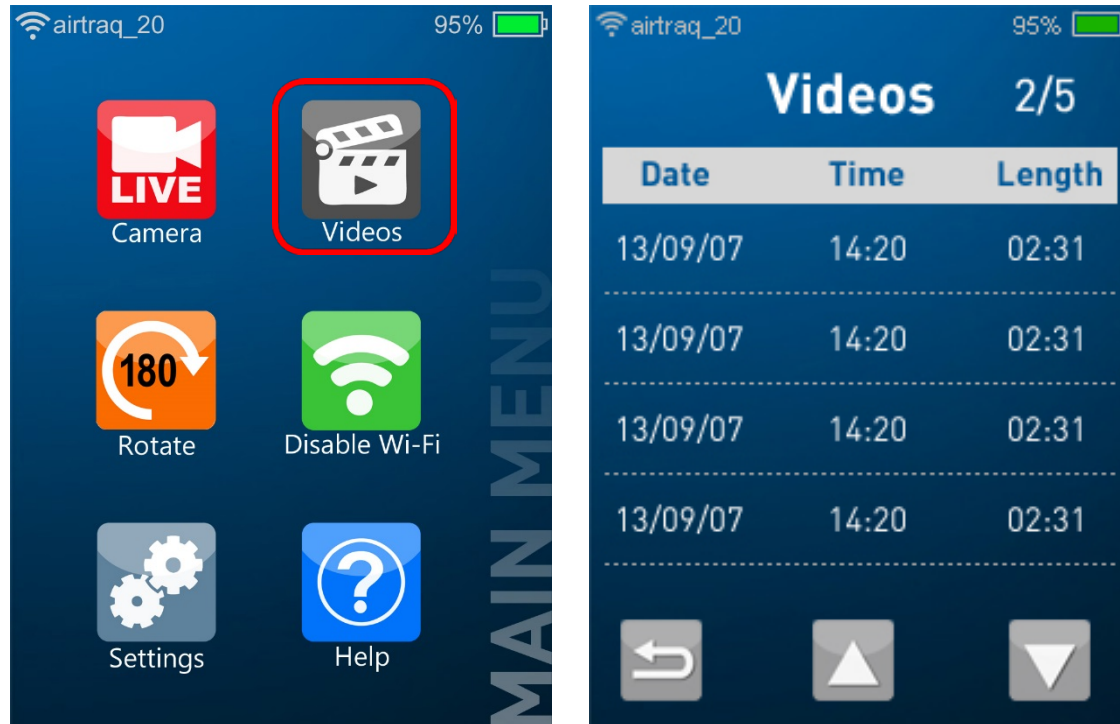
- Light conditions for the Airtraq pediatric sizes are different than in the adult modes. The camera must be adjusted in order to provide a good image.
- Press Pediatric Start 
- When pediatric mode starts, icon changes to  and a banner at the bottom is displayed
- Camera will start in adult mode by default.

Wi-Fi CAMERA | Video recording



- ✓ Start recording 
- ✓ When recording starts, icon changes to  and a time counter is displayed
- ✓ Recording does not work when battery is lower than 10%
- ✓ Maximum video length: 30 minutes
- ✓ Internal storage capacity: 10 hours

Wi-Fi CAMERA | Play recorded videos



- ✓ Video files are recorded into internal memory and can be downloaded to a PC through the USB-Micro USB cable provided.
- ✓ The screen will display a list of the recorded videos showing starting date/time and duration.
- ✓ Last recorded video will be first on the list.
- ✓ Navigate through the list of videos
- ✓ During playback action icons provide the following functions: play/pause and fast forward/rewind.

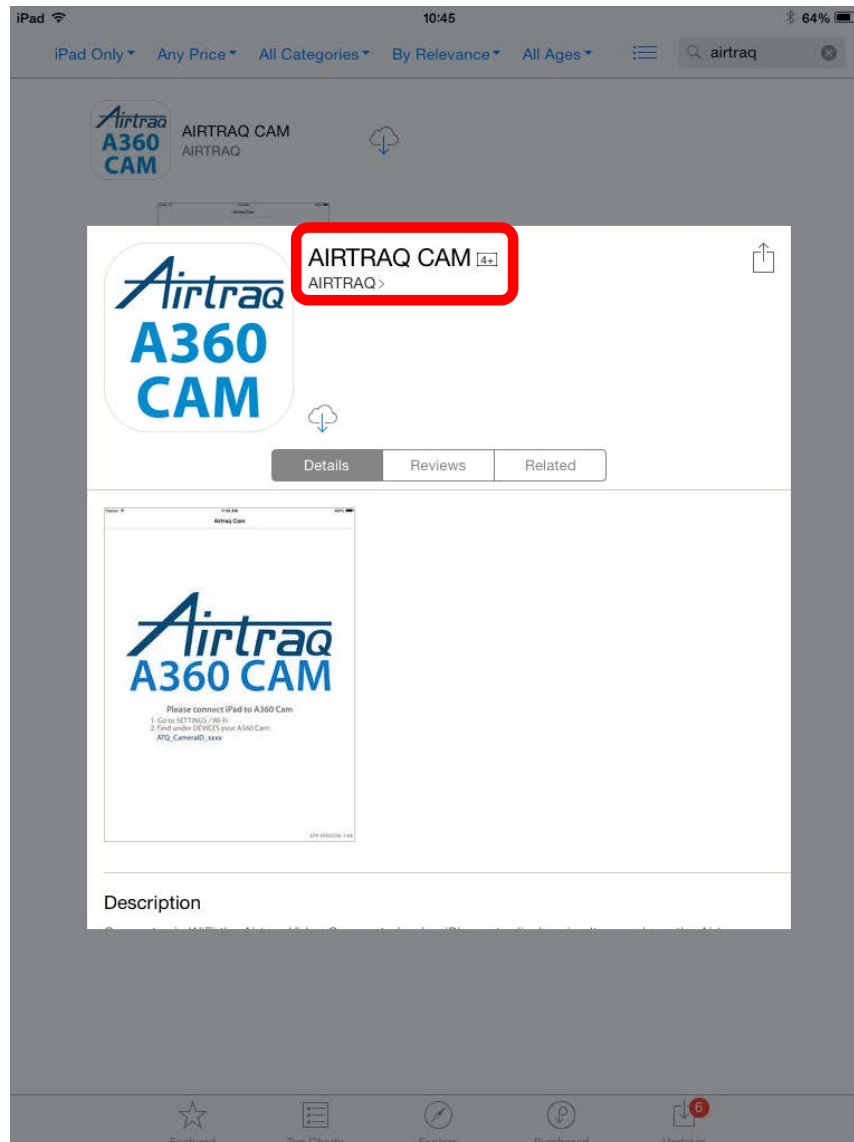
Wi-Fi CAMERA | Wi-Fi connection to PC, iPad® and iPhone®



- ✓ A360 creates its own Wi-Fi network
- ✓ It allows to connect up to 5 devices simultaneously
- ✓ Every device needs “Airtraq Cam” App installed
- ✓ Apps for iPhone / iPad must be downloaded from Apple Store. They are free of charge
- ✓ App for Windows PC’s shall be downloaded from Airtraq website.
- ✓ Devices will recognize A360 Wi-Fi with a name that always starts ATQ+Device ID



Wi-Fi CAMERA | Wi-Fi connection to iPad® and iPhone®

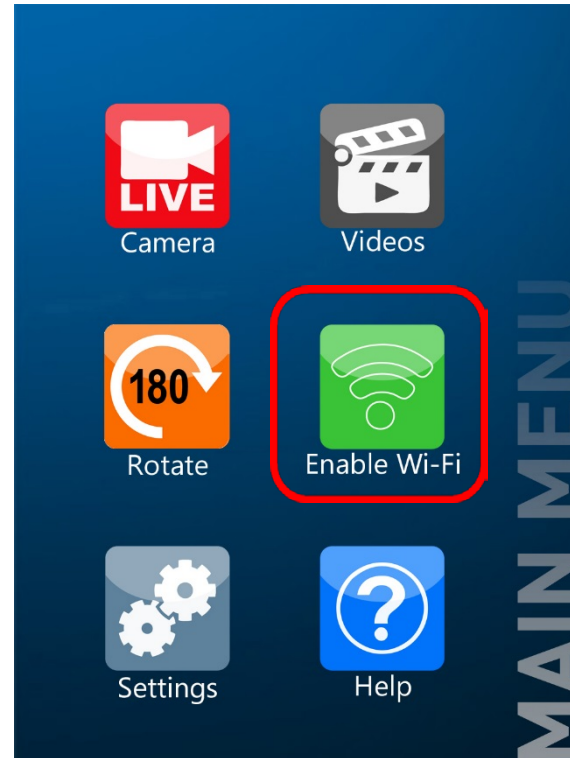
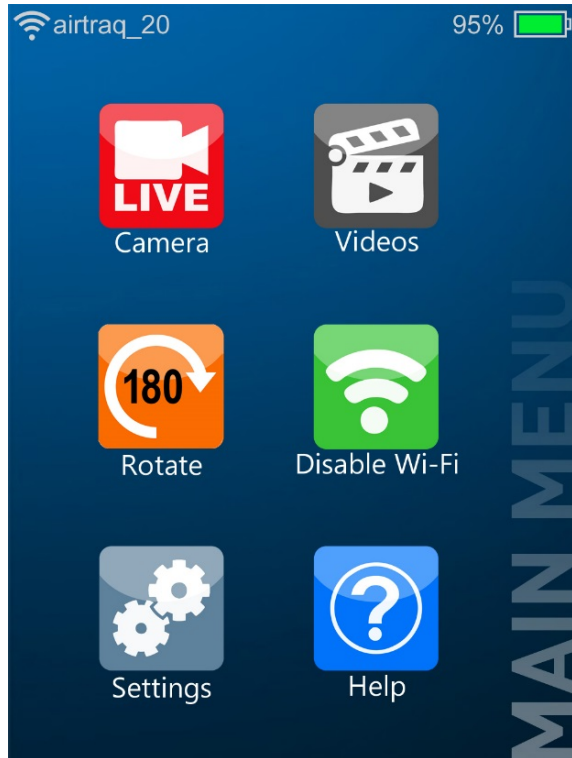


Download **Airtraq Cam** app on to your Phone or Tablet



Apple and the Apple logo, iPad and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

Wi-Fi CAMERA | Wi-Fi connection to iPad® and iPhone®



On Airtraq Wi-Fi Camera:

- ✓ Wi-Fi is enabled as default
- ✓ Check that Wi-Fi has not been disabled
- ✓ Go back to Live Video

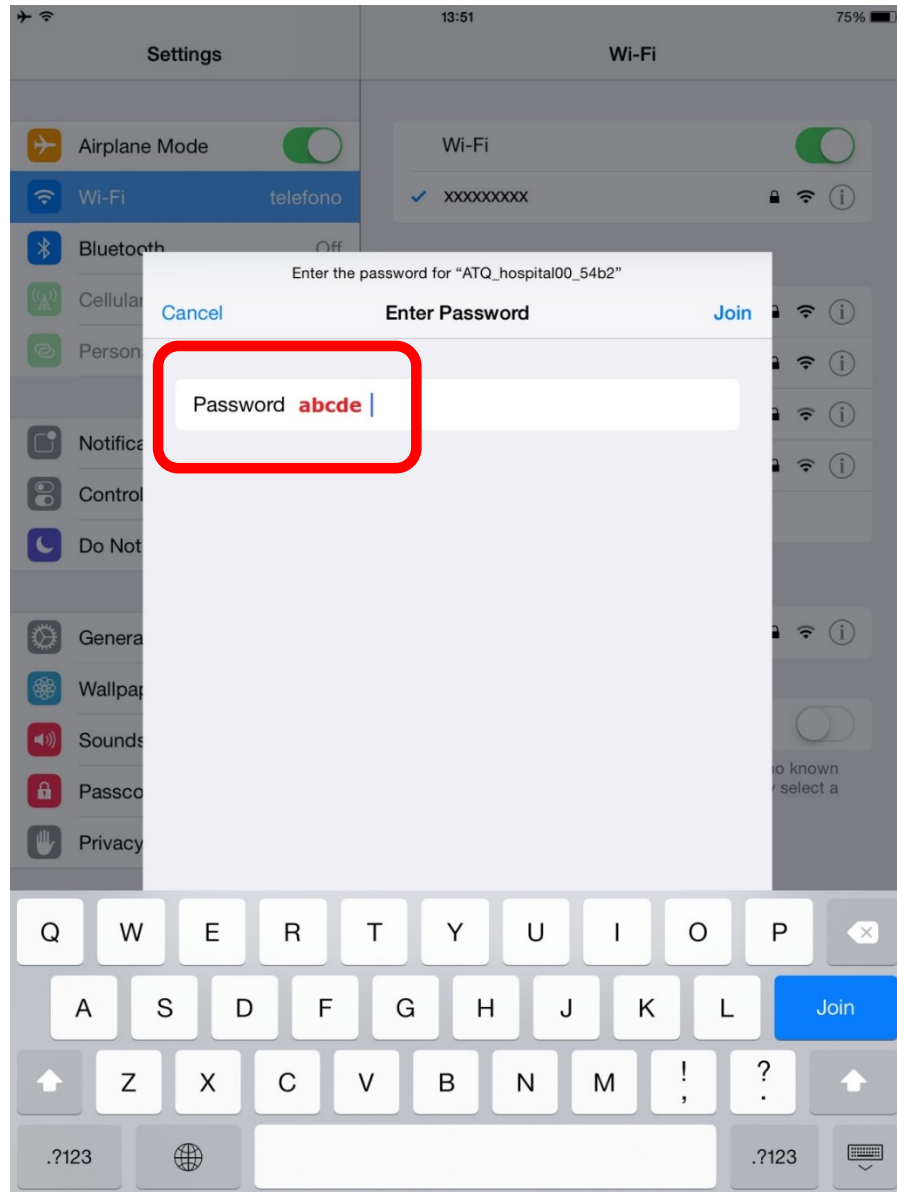
Wi-Fi CAMERA | Wi-Fi connection to iPad® and iPhone®



On iPhone® or iPad®:

- ✓ Go to Settings
- ✓ Set Airplane mode to avoid incoming calls
- ✓ Enable Wi-Fi
- ✓ Select Camera Wi-Fi ("ATQ.....")

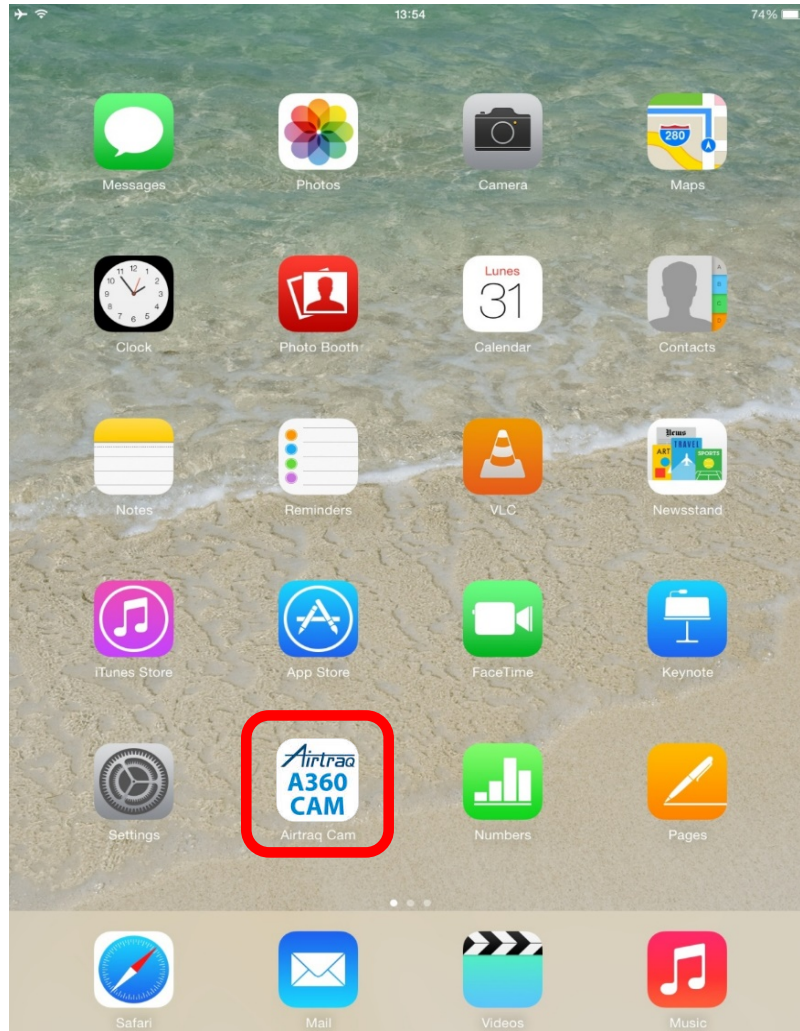
Wi-Fi CAMERA | Wi-Fi connection to iPad® and iPhone®



During the first connection Phone or Tablet will prompt for a password:

- ✔ Default password is "abcde"
- ✔ Password may be changed in camera's *Wi-Fi Settings* menu

Wi-Fi CAMERA | Wi-Fi connection to iPad® and iPhone®



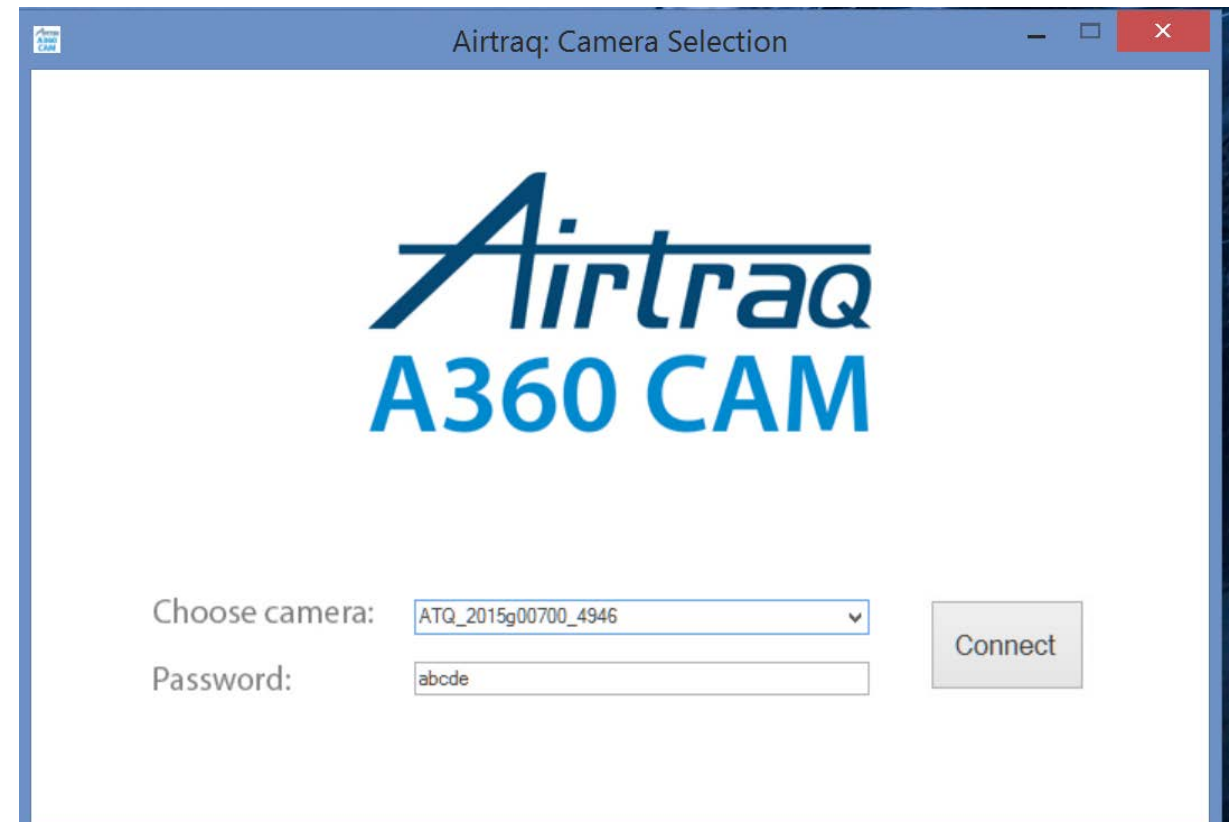
On Phone or Tablet:

- ✓ Launch **Airtraq Cam** App
- ✓ Connection will start automatically within aprox. 10 seconds



Wi-Fi CAMERA | Wi-Fi connection to PC

- ✓ A360 creates its own Wi-Fi network
- ✓ It allows to connect up to 5 devices simultaneously
- ✓ Download, free of charge, from Airtraq website Application "Airtraq Cam" for PC (windows compatible) and install it.
- ✓ PC will recognize A360 Wi-Fi and show a list of available cameras to connect with.



Wi-Fi CAMERA | Wi-Fi connection to PC for Tele-Intubation


- ✓ PC should have available:
 1. Wi-Fi connection to connect with A360 Cam
 2. Another means free to connect to Internet
- ✓ Connect to Internet and initiate a Skype call.
- ✓ Share your screen with the remote location.
- ✓ Connect Camera to PC via WiFi using Airtraq Cam App



PC Internet Connections to establish a Skype Call can be established by any of the following alternatives :

- ✓ Connect PC to a wired LAN
- ✓ Insert a wireless USB adapter to PC
- ✓ Use a broadband or 3G/4G card

Wi-Fi CAMERA | Download videos to a PC

- ✔ Turn On A-360 and **connect to PC using the USB/Micro USB** cable provided (directly or through docking). After a few seconds the PC will recognize the A-360 as an external storage device called "Airtraq Cam".
- ✔ The camera screen will show the USB symbol. 
- ✔ Some PC's have usb port designed to charge batteries of external devices. Do not use that USB since the the camera will start battery charging.
- ✔ If the Camera is connected when turned off it will be started automatically and the recognition will take a little longer
- ✔ Go into **folder "Airtraq Videos"**
- ✔ Videos are named automatically with the device ID and date and time at which they were recorded "deviceid_yy_mm_dd_xxh_xxm_xxs.mpg"
- ✔ Copy to PC or delete video files as wished.
- ✔ If A-360 is connected to a PC immediately after recording a video, then it may take some time before the video is available for downloading. In this case a message saying "Converting Videos" is shown on the A-360 screen.
- ✔ After downloading **eject Camera safely** before disconnecting the USB.

Wi-Fi CAMERA | Trouble shooting

- ✔ Make sure that A-360 **battery is properly charged**.
- ✔ Make sure that the **Last Internal Software version is installed**. Check Airtraq web site and compare with SW version shown on System Info screen.
- ✔ If Wi-Fi connection to iPad/iPhone is not working properly restart iPad/iPhone and A-360.
- ✔ If when connected to a PC through the USB/Micro USB cable the A360 does not appears as "Airtraq Cam", save all videos to PC, disconnect A360 from PC and then select "Settings" from Main Menu and select **"Delete Videos"**. This action will **reformat the A360 internal memory**.
- ✔ If the A-360 cannot be shut down try a **hard reset** by pressing the Reset Button, located near the lens of the camera, using a thin bar.

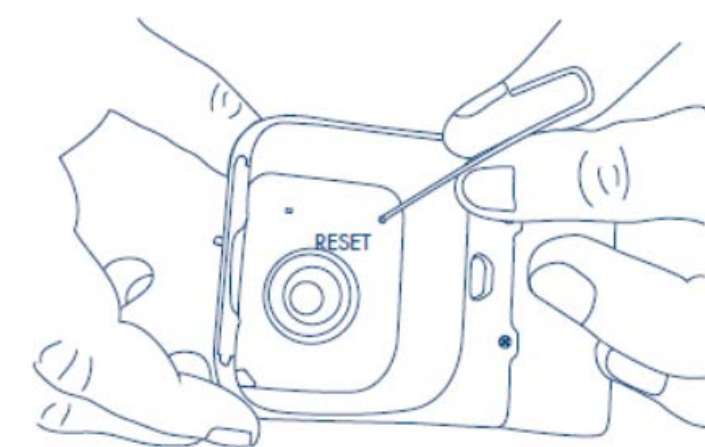
- Wi-Fi Camera Software
- Hi-res images
- Brochures and Instructions

✔ Select appropriate software version to upgrade your camera

- Check installed software version in System Info and download

Installed version	Latest version
1.x	Software cannot be upgraded
2.x	2.9
3.x	3.9

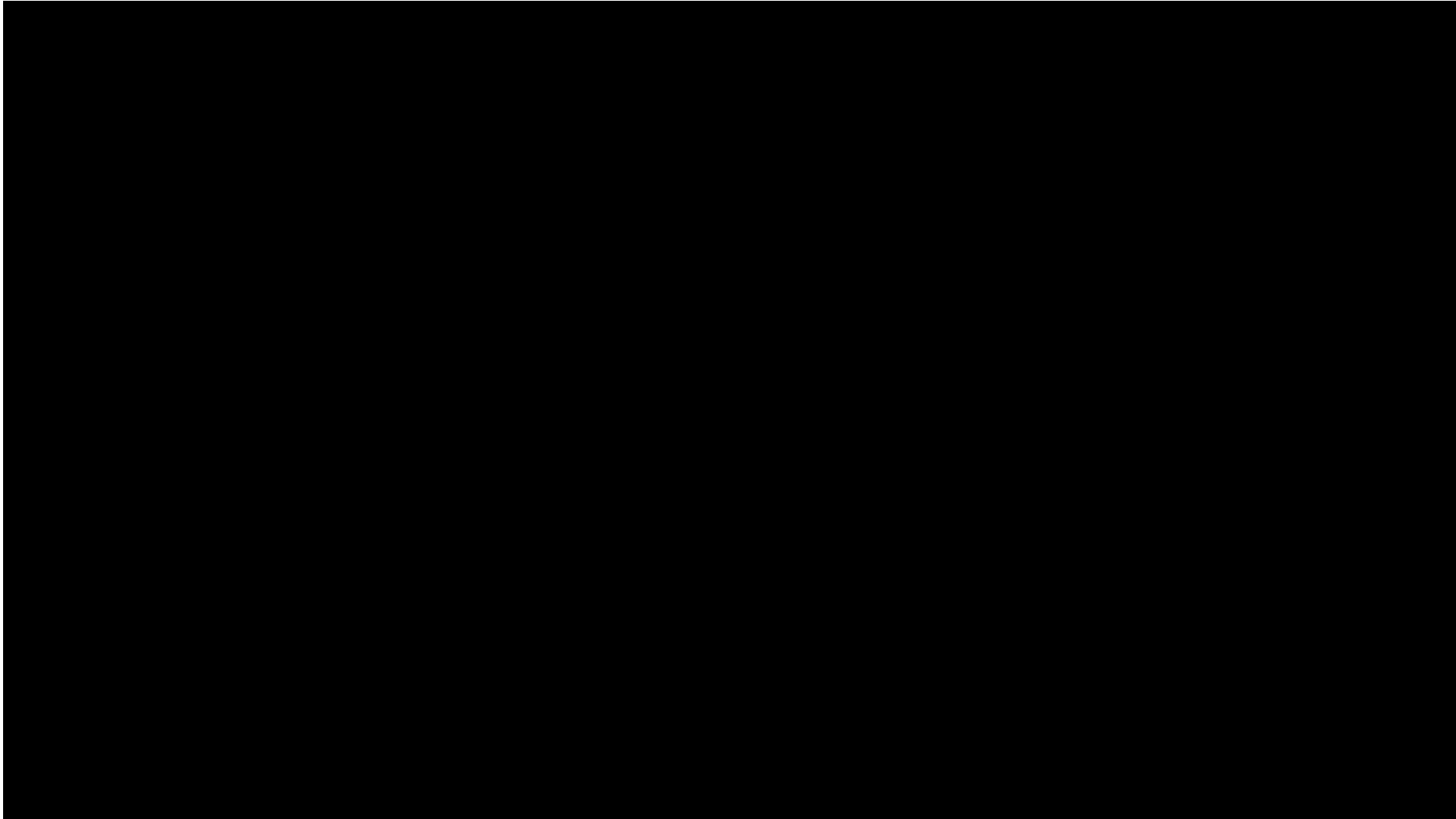
[LINK TO VIDEO: How to upgrade A360 camera software](#)



Wi-Fi CAMERA | Internal Software Upgrade

- ✔ A-360 must be at least **over 90% charged** before upgrading. Otherwise the unit will not upgrade.
- ✔ **Download latest version of A-360 Internal Software** "A360SW_Vxx.x" from downloads section **in Airtraq website** www.airtraq.com and unzip it.
- ✔ Turn On A-360 and connect to PC using the USB/Micro USB cable provided (directly or through docking). After a few seconds the PC will recognize the A-360 as an external storage device called "Airtraq Cam".
- ✔ **Open "Airtraq Cam" and go to folder "System". Copy "A360SW_Vxx.x" from PC to "System".**
- ✔ Keep A-360 cable connected to PC and, using PC's menus, remove safely A-360 from PC (as usually done to remove any USB external device).
- ✔ **Press and hold the On-Off button until "updating" is shown on the A-360 screen** (it will take around 20 seconds). Once the updating process is finished (it can take seconds or a few minutes depending on the update being performed) the **screen will display "OK" message**.
- ✔ Disconnect the cable between PC and A-360. Turn on A-360 and check "System Info" to confirm the new software version is installed.

Wi-Fi CAMERA | Internal Software Upgrade



Wi-Fi CAMERA | Cleaning

- ✔ Recommended cleaning is low-level disinfection between each patient use.
- ✔ Remove A-360 from the Airtraq and turn it OFF.
- ✔ Cleaning: wipe down the exterior surfaces of the A-360. Be careful to keep running liquid off the surfaces.
- ✔ The following **cleaning solutions** may be used:
 - ✔ Enzymatic Cleaning Solutions (e.g.: ENZOL™ Enzymatic Detergent), Neutral pH soap and water, Sodium bicarbonate solution (8- 10 %).
- ✔ The following **disinfection agents** may be used:
 - ✔ Peracetic Acid Solution (0.08%), Isopropyl Alcohol (70%), Solution containing 70% isopropyl alcohol and 2% chlorhexidine (e.g. Clinell Wipe) , Solution containing chlorine dioxide (e.g. Tristel Wipe). PDI Sani-Cloth Germicidal Wipes (AF3, Bleach, Plus or Super Sani-Cloth)
- ✔ Blot dry the A-360 using an individual sterile surgical towel.
- ✔ Caution: Do not autoclave, Do not rinse under running water, Do not soak in liquids, Avoid liquid or moisture from going into the A-360, Avoid touching the lens of the A-360, Be careful with A-360 touch screen.

Wi-Fi CAMERA | Warranty

- ✔ The A-360 camera must be properly handled.
- ✔ Avoid drops that will probably damage the camera.
- ✔ The A-360 camera is guaranteed for 1 year.

PHONE ADAPTER



PHONE ADAPTER

HOW IT WORKS

Download and Install "*Airtraq Mobile*" App
Phone can be used with or without case

INITIAL SET-UP (once for each smartphone)

1. Align Smartphone camera with Airtraq optical axis. Use "*Airtraq Mobile*" app, **Alignment function** on settings menu. Slide adapter up & down and slide phone right to left.
2. Block screws to have the phone ready for regular use.

REGULAR USE

1. Insert smartphone into *Universal Adapter*
2. Clip *Universal Adapter* onto any Airtraq
3. Start "*Airtraq Mobile*" app



Airtraq Mobile



PHONE ADAPTER

SMARTPHONE'S CAMERA UP & DOWN ALIGNMENT

Slide tray to align Phone's camera with Airtraq optical axis

1. Clip *Universal Adapter* onto any Airtraq
2. Launch *Airtraq Mobile* app and click on Settings / Alignment Function
3. Align line on screen with green dot on adapter and block



PHONE ADAPTER

SMARTPHONE'S CAMERA RIGHT TO LEFT ALIGNMENT

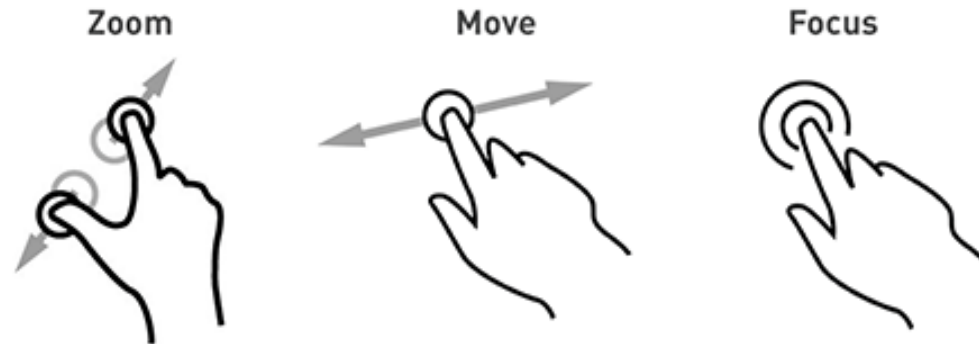
1. Go to live video in *Airtraq Mobile* app
2. Slide smartphone until image is displayed on the screen
3. Slide long axis positioner until it contacts smartphone and block it





PHONE ADAPTER | Airtraq Mobile app

- ✓ **Start Airtraq Mobile app** 

- ✓ **Focus & Zoom**



- ✓ **Video recording**
 - To start press icon 
 - To stop press icon 

- ✓ **Taking pictures**
 - Press icon  to take a picture

- ✓ **Activate or cancel Mic during recording**
 - Press icon 

- ✓ **Play recorded videos / view pictures**

- Press icon  to go to *Gallery*

- ✓ **Edit Intubation data**

- To add a description or rename a video with the patient's name, select the item in the *Patient List* and press icon **i**

PHONE ADAPTER | Cleaning

- ✔ Recommended cleaning is low-level disinfection between each patient use.
- ✔ Remove Adapter from the Airtraq.
- ✔ Cleaning: wipe down the exterior surfaces.
- ✔ The following **cleaning solutions** may be used:
 - ✔ Enzymatic Cleaning Solutions (e.g.: ENZOL™ Enzymatic Detergent), Neutral pH soap and water, Sodium bicarbonate solution (8- 10 %).
- ✔ The following **disinfection agents** may be used:
 - ✔ Peracetic Acid Solution (0.08%), Isopropyl Alcohol (70%), Solution containing 70% isopropyl alcohol and 2% chlorhexidine (e.g. Clinell Wipe) , Solution containing chlorine dioxide (e.g. Tristel Wipe). PDI Sani-Cloth Germicidal Wipes (AF3, Bleach, Plus or Super Sani-Cloth)
- ✔ Blot dry using an individual sterile surgical towel.
- ✔ Caution: Do not autoclave, Do not rinse under running water, Do not soak in liquids.

END OF
MODULE D: DETAILED DEVICE
CHARACTERISTICS

GO TO QUIZ

GO TO NEXT MODULE