User Manual for the iFalcon Veterinary Tonometer

Applicable to iFalcon Veterinary Tonometer

Hangzhou iFalcon Technology Co., Ltd.

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1. Intended Use

iFalcon V700 rebound tonometer is specifically designed for measuring intraocular pressure (IOP) in animals. Depending on the version you purchased, the tonometer can measure the IOP of various animals, including Feline, Canine, Equine,Lapine, Rat,mouse and Primates. The tonometer must be used with the TVP40 disposable probes produced by our company.

This product is designed for animal eye pressure measurement and has one-button measurement capability. Users do not need specialized skills or training to proficiently use the device.

2. Introduction to Measurement Principle

iFalcon V700 rebound tonometer uses clinically validated rebound technology to quickly and accurately measure intraocular pressure (IOP) without the need for surface anesthesia. It is suitable for various postures, including lying down or standing.
The device operates by launching a specially designed probe(with a medical-grade plastic tip and magnetized metal shaft) perpendicularly to the center of the cornea. The probe moves under the influence of a magnetic field, makes contact with the cornea, and then rebounds immediately. The device captures the probe's speed changes and rebound time through coils, and calculates the eye pressure value using proprietary algorithms. Each measurement combines six independent test results to ensure data reliability.
The reading is displayed in real-time and automatically stored in the device.

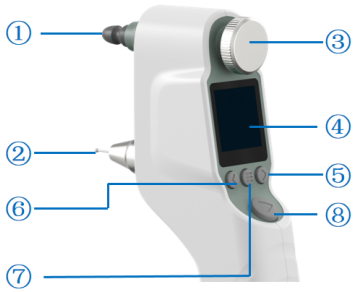
3. Package Contents

⚠ Please handle the equipment carefully.Upon unboxing, immediately inspect the tonometer for any damages (especially the casing). If any damage is found, stop using the device immediately and contact the manufacturer or distributor. It is crucial to protect the device and ensure the accuracy of future measurements.
iFalcon V700 tonometer package may include the following items:

Item	Description
4 x 1.5V AA Batteries	Provides stable power to the device.
Wrist Strap	Secure the device during use, preventing accidental drops.
Aluminum Case	Storing and protecting, moisture and shock resistance.
Screwdriver	For replacing batteries or other basic maintenance tasks.
Probe Holder Cap	Protects the probe holder from dust and other contaminants.
Additional Probe Holder	A spare probe holder to ensure the device functions properly.
Quick Guide	A guide to quickly understand the basic operations.
User Manual	Provides clear operation instructions.
Warranty Card	Information on product warranty and terms.
Probes	Disposable components used for eye pressure measurement.

4.Components of Tonometer

1、Positioning Forehead Rest
2、Measurement Probe
3、Adjustment Knob
4、Display Screen
5、Left Selection Buttons
6、Right Selection Buttons
7、Setting Button
8、Emission Button



5.Getting Started with the Device

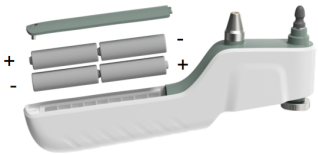
Before using the rebound tonometer for the first time, please install the wrist strap and batteries.

5.1 Installing the Wrist Strap

Thread the loop at the end of the wrist strap through the two holes at the bottom of the device (as shown below). Thread the strap's end back through the loop and pull to secure it. Always use the wrist strap to secure the tonometer to your wrist during use to prevent it from falling.

5.2 Installing the Battery

Use the included screwdriver to loosen the screws on the battery compartment cover and remove the cover. Insert four new 1.5 V AA batteries, ensuring correct polarity as marked on the device. Replace the cover and tighten the screws using the screwdriver. Do not overtighten. Only use the battery type specified in the manual.



5.3 Powering on the Tonometer

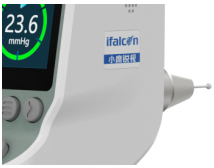
Press the "Emission" button to power on the tonometer.

Upon pressing the "Emission" button, the device will power on, display the iFalcon logo, and enter the test interface.

5.4 Loading the Probe

Take a new probe in tube and place it upright. Remove the protective cap, carefully invert the tube, and slide the probe into the tonometer's probe holder (as shown). The tonometer will magnetize the probe and secure it in place.

Even if the device is not powered on, the probe can be loaded into the tonometer. Upon starting the measurement sequence, the device will detect the probe insertion and automatically display the measurement menu. However, please note: the probe will not stick when the device is off,so ensure that it does not fall out.



To avoid contamination, do not touch the exposed probe directly with your fingers. If the probe contacts an unsterilized surface (such as a desk or floor), or if it is touched or dropped, do not use it and dispose of it properly (e.g., place it in a disposable needle container).

6.Measurement

6.1 Basic Measurement Mode

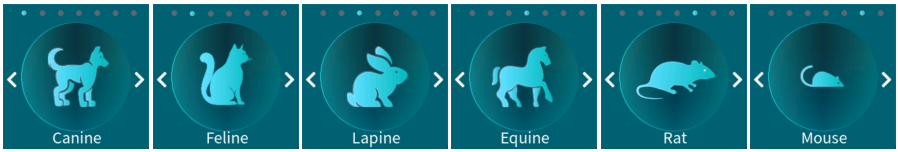
To conserve power, if no operation is detected within the preset auto-shutdown time (1, 3, or 5 minutes), the system will automatically shut down. During operation, apart from the probe tip contacting the cornea at the moment of testing, other parts of the device should not touch the subject's eye. When adjusting the forehead support, be careful not to push the device or probe into the eye. The forehead support should be adjusted to ensure that the probe tip is about **5-8**mm away from the eye.

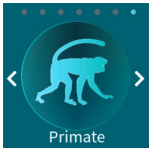
Step 1: Preparation

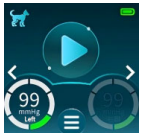
- Ensure the subject is relaxed, with their eyes facing forward. Position the tonometer directly in front of the subject's eye.
- If measuring from a different angle, ensure the probe is aligned with the center of the cornea and the emission direction is perpendicular to the corneal surface.

Step 2 : Set and Confirm

- Use the left/right buttons to select the eye to be measured (right eye OD / left eye OS), with left eye (OS) as the default.







- Confirm that the animal icon in the upper left corner matches the species being tested (the icon represents the current animal mode).
- When the screen shows the" ▶ " symbol, the device is ready.

Step 3 : Positioning

- Adjust the support wheel as needed so that the porbe tip is approximately 5-8 mm from the cornea.
- Position the tonometer in front of the eye, aligning the probe with the center of the cornea.
- Note: Avoid accidental contact with the eye (except during the measurement).

Step 4 : Measurement

- Press the "Emission" button for a single measurement.
- The probe tip should touch the center of the cornea. Complete 6 successful measurements.
- After each successful measurement, the gray circle on the screen will turn green, accompanied by a short beep.

Step 5 : Reading

After completing 6 successful measurements, the device will emit a long beep.
The final IOP value (in mmHg) will be displayed as a large number within a colored circle:

- Green Circle: Measurement quality is "Good".
- Yellow Circle: Measurement quality is "Acceptable".
- Red Circle: Measurement quality is "Unacceptable", suggesting remeasurement.

- If the "Retest" symbol appears, press the "Emission" button to retest.
- Note: The 6th value displayed is the final result (calculated from the best 4 measurements, discarding 2 outliers); the first 5 show the average of all previous tests.

Step 6: Follow-up Actions

1.Measure the Other Eye / Repeat Measurement: Repeat Steps 1-5. After each measurement, manually press the left/right button to switch to the other eye (the device will not automatically switch).
2.Power Off: Hold the device horizontally and press the "Settings" button for 3 seconds. The probe will automatically eject, and follow the instructions for disposal.
3.Maintenance: Cover the probe holder cap when not in use to prevent contamination.
Important Notes:
Measurement Validity: If you suspect the measurement is invalid (e.g., the probe is not centered on the cornea, or it touches the eyelid) or the reading is abnormal (too high/low), repeat the measurement or perform other validations.

Quick Mode

6.2

iFalcon V700 tonometer has a quick measurement mode. Once activated, the device will automatically start a sequence of six continuous measurements. When using the quick series mode, a set of 6 measurements can be completed in just a few seconds.
Specific steps for testing:

Step 1: Start

- Press and hold the "Emission" button to automatically perform 6 consecutive measurements (completed in a few seconds.)

Step 2: Progress Feedback

- For each successful measurement, the corresponding gray circle on the screen turns green.
- There is no individual beep after each successful measurement; only a final long beep will sound upon completion of all six measurements.

Step 3: Error Handling

- If any interference or measurement error occurs during testing, the quick test mode will be aborted..
- The device will emit two short beeps and display an error message.
- Press the "Emission" button to clear the error and continue with the remaining measurements in either quick or single mode.

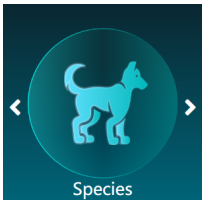
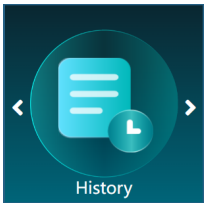
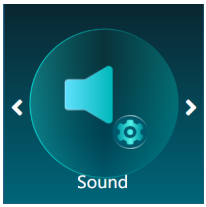
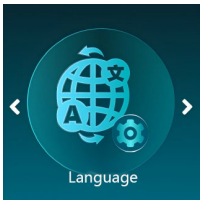
Step 4: Completion Notification

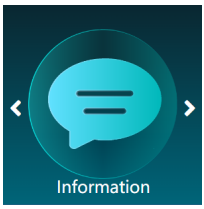
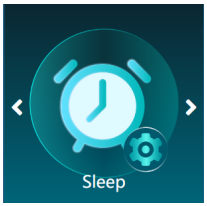
- After 6 successful measurements, a long beep will sound.
- The final eye pressure value will be displayed on the screen (calculation logic is the same as the standard mode).

Note: For error code explanations, refer to the "Error Information" section in the manual.

7.User Interface Functions

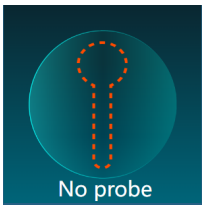
iFalcon V700 tonometer uses a color display screen as part of its user interface. Users can control the device via four buttons located at the bottom of the screen. Press either of the two navigation buttons (left/right arrow) to change the options displayed in the menu. The "Select" button in the middle is used to enter the settings mode and confirm options. The larger "Emission" button on the handle is used to initiate measurements.

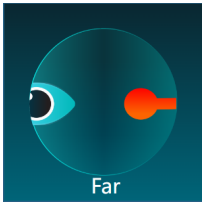
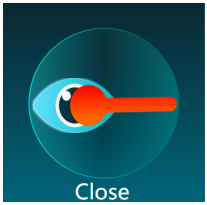
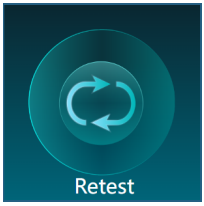
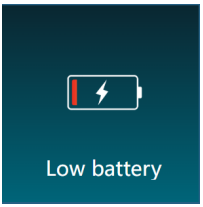
	Species Setting	Species Setting：Canine（default）、Feline、Lapine、Equine、Primates、Rat、Mouse
	History Data	View up to 100 sets of historical data, with newer data overwriting older ones.
	Sound Settings	Adjust volume. Options include: Loud, Quiet, and Mute.
	Language Settings	Currently supports Chinese and English. The language will update immediately after selection without needing a restart

	Device Information	Displays current SN number, hardware version, etc.
	Sleep Time	Set the automatic sleep time. The device will go into sleep mode after a specified period of inactivity (if no button is pressed), and the sleep time can be reset if a button is pressed. Available settings: 1 minute, 3 minutes, or 5 minutes.

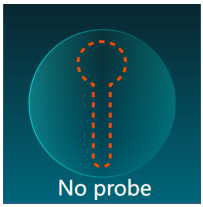
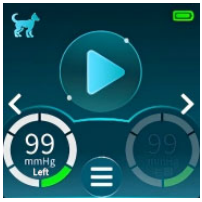
Press the "Settings" button to confirm the current selection. To exit the settings menu, press the "Emission" button.

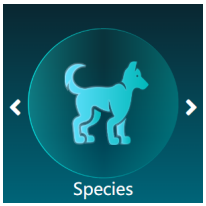
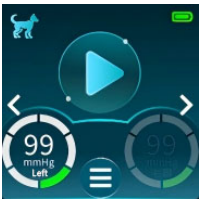
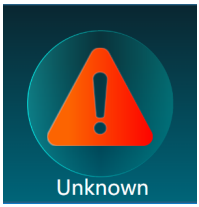
8. Error and Explanation Messages

	No Probe	The device may have no probe installed. Please install the probe again.
	Soft Object	The probe may have hit eyelashes or eyelids.

	Hard Object	The probe may have hit a hard object, or the eye pressure may be too high, exceeding the measurement range of the device.
	Too Far	The probe is too far from the cornea. Please adjust the distance.
	Too Close	The probe is too close to the cornea. Please adjust the distance.
	Retest	There is a problem with this test, and the data quality is not acceptable. Please retest.
	Low battery	Please replace the battery promptly.

9. Measurement Flow Chart

	Power On	Press the "Emission" button to turn on the device.
	Display Start Screen	The device will start
	System Test for Probe	The system checks if the probe is installed. If not, please install the probe.
	Install Probe	Insert the probe.
	Enter Testing Screen	Begin testing.

	You can adjust settings as needed	animal mode, left or right eye, language, etc.
	Start Measurement	Keep the probe perpendicular to the center of the cornea, then begin measurement.
	Check Results	View the measurement values.
	Errors may occur	Check the error message and resolve it.
	Shutdown	Press and hold the "Settings" button to turn off the device.

10. Accessories

No.	Accessory	Weight	Dimensions
1	Probe Holder	0.6 g	6 X 6 X 32 mm
2	Wrist Strap with Locking Clip	3.2 g	21.5 mm
3	Aluminum Case	676g	240 X 280 X 72 mm
4	Battery Cover and Screws	52.06 g	106.4 X 25.4 X 24.2 mm
5	Screwdriver	10.6 g	13.5 X 100 mm
6	USB flash drive iFalcon V700	16 g	70 X 20 X 10.5 mm
7	Probe Holder Cap	2.4 g	19 X 11 mm
8	Probe TVP40	50 g（100 pcs）	38 mm

11. Technical Information

Model and Specifications	Description
Model	V700
Dimensions	36.2 mm（W）×129.3 mm（H）×216.7 mm（L）
Weight	165g（without battery）
Power Supply	4 AA non-rechargeable batteries, 1.5V Alkaline LR6
Operating Environment	Temperature：+5° C to +40° C; Humidity：30% to 90%; Atmospheric Pressure：800hPa to 1,060hPa
Shipping Environment	Temperature：-40° C to +70° C; Humidity：10% to 95%; Atmospheric Pressure：500hPa to 1,060hPa
Storage environment	Temperature：-10° C to +55° C; Humidity：10% to 95%; Atmospheric Pressure：700hPa to 1,060hPa

12. Performance Data

The device's accuracy data is based on the US National Standard ANSI Z80.10-2009 and International Standard ISO 8612, originating from clinical studies, some of which use implanted tonometers as a reference.

	iFalcon V700 Veterinary Tonometer
Applicable Animals	Feline, Canine, Equine,Lapine, Rat,Mouse,Primates
Measurement Range	5.0-70.0mmHg
Display Range	0-99.9mmHg
Display Accuracy	0.1mmHg
Accuracy	For Feline, Canine, Equine,Lapine,Primates: ±1.2mmHg(IOP<20mmHg); ±2.2mmHg(IOP>20mmHg) For Rat,Mouse: ±10%
Measurement Angle Range	240°
Product Expiry	3 years
Storage Environment	Temperature: -10° C to +55° C; Humidity: 10% to 95%; Atmospheric Pressure: 700hPa to 1,060hPa

13. Safety Information

Eye Safety

- Do not allow the device to directly contact the eye. The probe tip must be aligned perpendicularly to the center of the cornea, maintaining a distance of 5-8mm.
- The contact time of the probe is very brief (about 2-3ms); only the probe can briefly touch the eye.

Probe Usage Guidelines

- Single-use only: Each probe is intended for a single measurement only.
- No reuse: Reusing probes can lead to measurement errors, cross-contamination, or eye injury. The manufacturer is not responsible for any such incidents.
- Pollution prevention: Unused probes should be sealed and stored; if the probe touches an unsterilized surface or falls, discard it and place it in a sharps container.
- Inspection requirements: Before use, ensure the probe packaging is intact and that the probe has a visible plastic round tip after insertion.

Device Maintenance and Repair

- No self-repair: Only qualified technicians should open the device (except for consumables).
- Consumables replacement: Replace the battery and probe holder every 12 months; replace the battery promptly when the power is low.
- Daily inspection: Visually inspect the device before use. If damage is found, stop using it and contact the distributor.

Liquid and Electromagnetic Protection

- Waterproof requirements: Avoid liquid contact with the device, especially with interfaces/switches. If liquid is spilled, wipe the device clean and allow it to dry before use.
- Electromagnetic interference:
- Keep at least 1 meter away from other devices to avoid stacking.
- Proximity to strong radiation sources (e.g., mobile phones) may affect performance and interfere with sensitive devices.
- External magnetic fields can cause measurement failure. Remove the interference source or change location.

Operating Guidelines

- Measurement requirements: The device must be perpendicular to the center of the cornea, and strict operation according to the manual is required to ensure accuracy.
- Anesthetics: Do not use eye anesthetics during measurement.
- Auto shut-off: The device will automatically shut off after 1-5 minutes of inactivity (depending on settings), and the probe will automatically eject.

Accessories and Modifications

- Use only original accessories: Using non-designated accessories may cause malfunction.
- No modifications: Unauthorized modifications to the device are at the user's own risk.

Safe Storage and Disposal

- Child safety: The device contains small parts (e.g., probe holder/battery cover), so it should be kept out of reach of children to prevent swallowing.
- Battery management: Remove the battery if the device is not in use for a long period. Dispose of used batteries/probes according to local regulations.
- Wrist strap usage: Always use the wrist strap during operation to prevent the device from falling.

Other Key Matters:

- Device Use: For intraocular pressure measurement only. Any other use is considered improper operation, and the manufacturer is exempt from liability.
- Fault Handling: If the device malfunctions, immediately stop using it and contact professional repair services; do not use it in flammable environments.
- Compliance Requirements: Follow the veterinary medical device regulations of the country in which the device is used, and do not connect it to an IT network.

14. Maintenance and Safety Guidelines

Device Disposal and Recycling

14.1

Please follow local regulations and instructions for the disposal and recycling of the iFalcon rebound tonometer and its accessoriesto ensure environmental compliance.

14.2 Maintenance and Care Guidelines

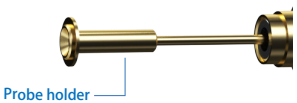
The rebound tonometer should only be opened by professional repair personnel. Other than the battery and probe holder, there are no user-replaceable parts. iFalcon V700 does not require daily maintenance or calibration but should have the battery and probe holder replaced at least every 12 months. For repairs, contact professional repair personnel or your local distributor.

14.3 Child Protection Guidelines

Avoid placing the rebound tonometer in areas where children can easily reach it, as small parts such as the probe holder, battery cover, screws, rings, and probes pose a swallowing risk. Keep the device away from children to prevent accidental ingestion.

14.4 Probe Holder Replacement Instructions

1. Problem-triggered replacement: If the probe frequently jams, clean the probe holder first. If the jamming issue persists after cleaning, it is recommended to replace the probe holder.
2.Scheduled replacement: It is recommended to replace the probe holder every 12 months.



Replacement Steps:

1. Turn off the tonometer.
2. Manually unscrew the probe holder ring and place it in a safe location.
3. Remove the old probe holder with your fingers.
4. Insert the new probe holder.
5. Screw the probe holder ring back down to secure it.

14.5 Cleaning Procedures

Cleaning Warning:

Do not submerge the iFalcon V700 in liquid. Avoid liquid from entering the device or its accessories, connectors, switches, or base openings. If liquid contacts the surface, wipe it immediately and let it dry completely before turning the device on.

Cross-contamination Prevention:

To prevent cross-contamination and infection, clean the forehead support component of the rebound tonometer with disinfectant after each measurement.

14.6 Device Return and Maintenance

Return Process

If you need to return the device for maintenance or repair, contact your local distributor for shipping instructions. Use appropriate packing materials to protect the device during shipping, and choose a delivery method that provides proof of delivery.

Regular Safety Check Recommendations

It is recommended to check the tonometer's functionality and mechanical condition at least every 12 months.

iFalcon：Guardians of Bright Vision

Corporate Information

Hangzhou iFalcon Technology Co., Ltd. was established in 2025 and is a high-tech company focused on the development of ophthalmic medical equipment. The core product of iFalcon is a professional tonometer, aimed at providing precise and convenient intraocular pressure measurement solutions for ophthalmic clinics and medical institutions. The product uses advanced rebound technology, enabling rapid and accurate measurement of eye pressure, helping doctors to monitor eye health, prevent, and manage eye diseases in a timely manner.

Corporate Honors

iFalcon team won second place in the 2024 China Eye Valley Optometry Innovation and Entrepreneurship Global Challenge Finals and received key project support from the government of Hangzhou, Zhejiang Province.

Corporate Mission

The mission of iFalcon is to provide users with high-quality ophthalmic care solutions through innovative technology products, safeguarding the eye health of every patient. The company is committed to becoming a global leader in ophthalmic medical equipment, bringing high-quality ophthalmic care services to every corner of the world. The company upholds technological i nnovation, continuously launching new products and services that meet market demands, and is user-driven, providing excellent user experiences that exceed expectations.

Hangzhou iFalcon Technology Co., Ltd

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