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Table of Contents

QUICK CHECK 2 FEATURES4

OPERATION5

POWERING THE UNIT.....7

COLLECTION9

**READING SPERM CONCENTRATION
.....10**

EXTENSION PROTOCOL12

DISPLAY MENU / SETTINGS14

CALIBRATION.....16

 LOOKUP TABLE PRINCIPLES17

 LOADING CALIBRATION TABLES18

 SAVING THE CURRENT CALIBRATION
 TABLE19

 DISPLAYING THE CONTENTS OF THE
 CURRENT CALIBRATION TABLE20

 ADDING POINTS TO THE CURRENT
 CALIBRATION TABLE21

 CHANGING THE ZERO POINT22

QUICK CHECK 2 PC SOFTWARE: ...22

SPECIFICATIONS.....26

WARRANTY27

INDEX30

Semen Analysis, Simplified!

Thank you for choosing the Next Generation™ Quick Check™ 2 sperm counter. Please take the time to read this user guide in its entirety prior to use.

Accurate semen counting is one of the most critical steps in breeding management. The Quick Check 2 Semen counter is a fast and economical method for analyzing sperm concentration. When preparing semen for shipment, it is important to know the sperm concentration in order to ensure the proper volume for shipment. Ship too few sperm and the probability of conception drops dramatically. Standard methods for counting require a hemacytometer, a microscope, and plenty of time and patience. With the Quick Check 2, semen analysis takes only seconds.

ICON KEY

Valuable information

Important Safeguards

Using this guide: To make scanning through this manual to obtain key information faster, key data will be highlighted with “icon keys”. These icons (shown at left),

will help you find information to get started using the Quick Check 2 quickly.

Quick Check 2 Features

The Quick Check 2 uses a four-beam, ratiometric nephelometric turbidity analysis technique to deliver accurate readings for the life of the unit. With other density-based systems, factors such as bulb life and temperature variation can impact the accuracy of a reading. With the Quick Check 2, these effects are all fully compensated for.

Many semen analysis systems require sample dilution. The Quick Check 2 can read undiluted semen for the highest accuracy. However, for species with low volume ejaculate or high concentration counts it is possible to read diluted semen—as long as a dilution table has been calibrated. Canine Quick Check 2 units come pre-calibrated for 200:1 dilution.

The Quick Check 2 operates on a single 9V battery, making it ideal for use in the field. The Quick Check 2 includes a USB PC communications port that allows the unit to display readings on a PC, which also doubles as a power cord when using the included wall adapter or other powered USB port. This same connection can be used to download software updates as they become available.



The Quick Check 2 comes pre-calibrated to measure undiluted equine semen concentration (or diluted semen for canine), and requires no additional user calibration. However, for advanced use with other species (raw or diluted) semen, four user customizable calibration tables are available. These tables are non-volatile (i.e. they will remain in the unit even if power or batteries are removed).

Take a few moments to review the keypad, display, and connectors for the Quick Check 2.

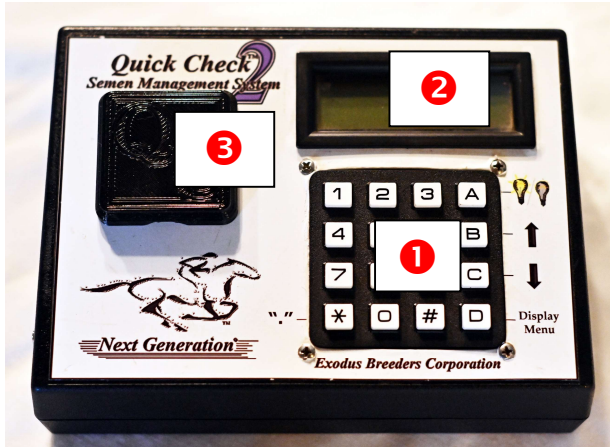



Figure 1: Front Panel Controls

As shown in Figure 1, the Quick Check 2 front panel includes a 16 key keypad ①, a backlit LCD display ②, and the cuvette receptacle ③.

Figure 2 shows the back panel of the Quick Check 2, including the

power switch ④, the battery compartment ⑤, and the USB port ⑥.

Operation

 Prior to using the Quick Check 2, please review the environmental precautions below to ensure a long and trouble-free life of the unit. Failure to observe these precautions could lead to inaccurate readings, or damage to the unit.

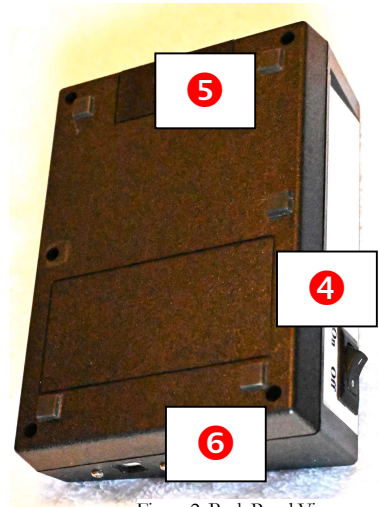


Figure 2: Back Panel View

Keep all liquids away from the unit. Prior to inserting a cuvette, ensure that the cuvette is clean and dry so that no foreign material gets trapped inside the optical cavity.

Ensure that the battery is fresh, or the unit is connected to USB power. When replacing the battery, we recommend Duracell® CopperTop 9V batteries. Carefully pry the battery connector off with a standard blade screwdriver to avoid putting stress on the battery wires.

Although the design of the Quick Check 2 compensates for temperature variations and gives accurate results over a wide range of temperatures, extreme temperatures should be avoided. When temperatures are too cold (less than 32 degrees Fahrenheit), the display will seem “sluggish”. When too hot (greater than 110 degrees Fahrenheit), the display will appear dark. Returning the unit to normal temperatures should result in normal operation. Take care, however, when taking readings after a quick temperature change in the unit. In humid environments, condensation can occur when quickly changing from a cold temperature to a warm temperature. Condensation on the optical elements can affect the accuracy of the unit. Any time the unit’s temperature is changed dramatically, it is a good idea to allow the unit to stabilize at the new temperature for an hour to ensure proper readings. Leaving the unit on while connected to AC power during this warm-up period will help reduce condensation build-up.

The Quick Check 2 automatically compensates for ambient light levels. Avoid changing the ambient light levels while a reading is in progress.

Be careful not to drop the Quick Check 2: it is a sensitive electronic instrument.

Powering the Unit

The Quick Check 2 operates off of USB power, DC (9v battery) power, or an optional USB automobile power adapter.



Battery Installation: Remove the battery compartment cover, and connect a 9v battery to the connector inside. After inserting the battery, replace the compartment cover. Please use a high quality battery (we recommend Duracell®) for

longest life. Rechargeable batteries are not recommended due to their lower voltage levels.



USB Power: Using the wall transformer supplied with the Quick Check 2, connect the USB cord to the side of the unit. Plug the USB cord into the supplied AC adapter or any other USB power source. When on USB power, the

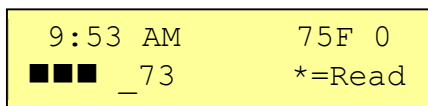
unit will remain on regardless of the position of the power switch.

When using battery power, the switch on the back of the unit controls power.

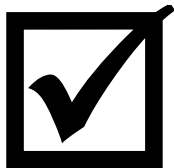
The Quick Check 2 requires only a few moments to turn on. The display will look something similar to:

```
Quick Check(tm)    0
V6.0_73           *=Read
```

After a few seconds, the display will update, showing the current time in the upper left, the temperature in the upper right, and the battery level on the lower left:



As soon as the display has the “*=Read” text showing, the unit is ready to read the sample. The “0” at the upper right indicates the current table is the factory calibration table. A number between 1-4 would indicate that the unit currently has a table loaded with an alternate calibration.



Firmware version: The firmware version is displayed at power up. In the example above, the Quick Check 2 firmware version is 6.0_73.

Reading the display in low light: The Quick Check 2 has a built-in backlight. To toggle the state of the backlight, press the ‘A’ key whenever the unit is ready to read a new concentration value (i.e. whenever the display contains “*=Read”).



The light will automatically turn off after 1 minute in order to conserve power. If the light was on but turned off automatically, hitting any key will turn the light back on for 1 minute.

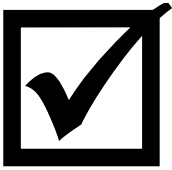
The Quick Check 2 is supplied with a calibrated standard. Prior to using the unit, check that the unit is reading within +/- 5% of the value indicated on the standard. If the unit reads more than 5% off of the standard value, contact Primo Ponies for assistance. **Please retain the standard with the unit, do not throw it out.**

Collection

Collection is the most critical phase of the Artificial Insemination (AI) process. Please follow the following guidelines when collecting your stallion:



A thorough washing of the subject prior to collection is critical. Any dirt or contaminants introduced into the sample will not only affect the concentration reading, but could also introduce harmful bacteria. Although antibiotics in the extender can help control the growth of bacteria in the sample, it is common sense to control the contamination at the source. In addition, all glassware, containers, pipettes, etc. that come in contact with the sample must be sterile.



Although the Quick Check 2 will give correct readings for semen samples regardless of morbidity, it is essential throughout the collection process that the temperature of the sample be carefully controlled. The temperature of the AV (Artificial Vagina) should be carefully monitored and maintained at a temperature that is most comfortable for the stallion. We recommend using a non-spermicidal lubricating gel.

After collection, semen should be processed for shipping as quickly as possible, while maintaining a constant temperature of 101 degrees Fahrenheit. Use of an incubator to maintain the correct temperature is essential. Keep all instruments, containers, extenders, slides, and any other equipment that will contact the sample in the incubator. The Quick Check 2 need not be maintained at the incubator temperature, however if the undiluted sample is to be used for insemination, ensure that the new sterile cuvette which is to be used is at the proper

temperature, and return the sample to the incubator immediately after reading.

Follow any instructions with the extender for proper mixing, as each extender may have different usage directions.

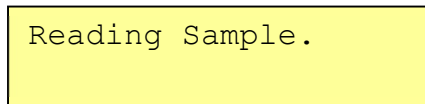
Reading Sperm Concentration

Fill a 4 ml Cuvette with either straight (raw) semen for Equine, or formalin-diluted gel free semen (diluted 200:1) for species with either very high concentrations ($>1000\text{M/ml}$) or very low volumes ($< 2\text{ml}$). For diluted reading ensure the calibration table is specifically calibrated for diluted semen reading.

Ensure that the cuvette is filled at least half way (2 ml). Tap the cuvette gently on a hard surface to remove any trapped air bubbles on the side of the cuvette, as they will impact the accuracy of the reading.

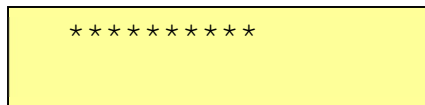
Insert the cuvette into the unit with clear surfaces facing top and bottom, and the uneven surfaces to the sides.

Press the **‘*’** key. The display should read alternately:

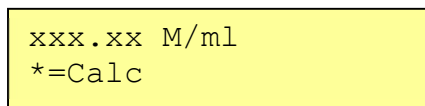


Reading Sample.

and



After approximately 20 seconds, the concentration will be displayed:



xxx.xx M/ml
*=Calc

The xxx.x represents the number of spermatozoa in the sample in Millions per ml.

Press the “*” key to obtain semen extender calculations for a 1.1 Billion sperm dose (750M motile sperm @ 70% Motility):

```
x.xxml semen SH
yy.yml ext *=Nxt
```

Each dose should be prepared with x.xx ml raw semen, and yy.y ml extender. The SH designator following the semen volume indicates that this extension calculation is for Cool Shipping. An FZ indicator would represent the extension required for Freezing. The shipping calculations are based on the following default concentration parameters:

- A minimum of 5:1 ratio of extender to raw semen. Extender ratios less than 5:1 may result in low motility after shipment.
- A maximum post extension concentration of 30M/ml.

Note: for very low concentrations, <100M/ml, large doses (>50ml) must be shipped for a full 1 Billion sperm. A low concentration ejaculate can be increased using centrifuging, however some research shows that this technique can potentially lower conception rates. To improve concentration, limit the time spent teasing the stallion, as it has been shown that while this increases the volume of the ejaculate, total sperm count generally remains constant.

1. To read a new sample, hit the “*” key, which returns you to the “*=Read’ screen. Go to step #2.

If after reading a sample you see the following display:

```
infM/ml
*=Calc
```

This indicates that the calibration table has been completely deleted, or the concentration of the sample is above the maximum calibration point.

If you know the sample concentration, you can add this point to your calibration table by following the directions in section: Adding Points to the Current Calibration Table.

Extension Protocol

The Quick Check 2 firmware allows the user to easily change the motility and extension protocol used for internal calculations of extension ratios for both freezing and cool shipping. Before reading a sample, press the '2' key:

```
Calibr. Table
#=Next, *=End
```

To modify the default motility or other protocol settings, press the '#' key. First you will need to select the desired Units. For breeding, please select M/ml:

```
Units          C=Chg
M/ml           #=Nxt
```

Here you can see that the current units value is already set to M/ml, so hit the '#' key to move on to the next protocol parameter, Minimum Extension:

```
Min Exten     C=Chg
5              #=Nxt
```

In this display, you can see that the minimum extension value is 5:1. If the default value of 5:1 is correct, proceed to Max

```
Min Exten?
```

Concentration by hitting the ‘#’ key. If, however, you need to change this value, hit the ‘C’ key:

Enter the new minimum extension value and hit the ‘#’ key.

Max Conc	C=Chg
30	#=Nxt

The default value of 30 represents the final shipped concentration should be less than 30M/ml. If the default value is correct, use the ‘#’ key to move on to the next parameter, Motility. If you would like to change the maximum concentration value, hit the ‘C’ key and enter the new value followed by the ‘#’ key.

Motility	C=Chg
70%	#=Nxt

The value 70 represents the default motility value (in percent) which will be used for calculation of extension ratios. Changing this setting allows you to adjust the calculations based on the observed motility (via microscope or other means). To change the motility, hit the ‘C’ key and enter the motility of the sample followed by the ‘#’ key. To continue without changing the motility value, press the ‘#’ key without entering any numbers.

The next value which can be changed for cool shipping is the final dose:

Dose	C=Chg
750M	#=Nxt

The default dose is 750M. To change the value, press ‘C’ and enter the new ship dose followed by the ‘#’ key. To leave the ship dose unchanged, press the ‘*’ key to leave the calibration parameter settings routine.

Display Menu / Settings

The Quick Check 2 has a Display Menu (‘D’) which gives the user access to many different unit settings. Access the Display Menu whenever the unit is in the ready to read (‘*=Read’) state. Hitting the ‘D’ key will bring up the Display Menu. The LCD display will show what the various shortcut keys will do, and looks like:

```
0: Disp History
1: Set Clock
..
```

Use the Arrow keys on the keypad: ↑ (‘B’) to scroll up and ↓ (‘C’) to scroll down. If you know the function number for the setting you want, you can enter that number directly from the ready to read state without selecting the Display Menu first.

The following functions are accessible:

- 0) Disp History – Displays a history of past readings. The display will look something like below. The X/Y/ZZ

```
X/Y/ZZ    5:44PM 0
XXX.X B← C→*=End
```

represents the date (which can be M/D/YY or D/M/YY depending on unit settings (see 5: Chg Settings)). The time is displayed next in either 12h or 24h format (also controlled by Chg Settings). The last number is the

calibration table used for the reading (where '0' represents the factory calibration table).

- 1) Set Clock – This allows the user to set the internal clock. We recommend you use the Quick Check software to update the clock, as it requires just a single button press. However, if you'd like to set the clock manually press '1' and follow the prompts to enter hours, minutes, seconds, AM or PM, day, month, and year. End each entry using the '#' key.
- 2) Disp Table – Display Table. This function allows you to see and modify the current calibration table. Modifications are not saved to the table until a 3) Save Table function is used. However, the modified settings will be preserved even if the power is turned off. Note that modified settings will be lost when a new table is loaded (using 4: Load Table). See the sections on Extension Protocol and Calibration for details on how to modify values in the current table.
- 3) Save Table. This function will save the current calibration into one of 4 user programmable tables.
- 4) Load Table. This function replaces the current calibration with the calibration stored in one of four user tables or the factory calibration table (0).
- 5) Chg Settings – Change Settings. Allows you to modify basic settings of the unit. You may leave the settings function at any time by pressing '*'. You may skip any setting without change by pressing '#'. Selecting this

*1 : AM/PM 2 : 24H

function will display: The ‘*’ shows which setting is currently configured. This display shows that the 12H (AM/PM) clock is being used. To select a 24H clock, press ‘2’.

The next setting allows you to configure temperature display in either 1: Fahrenheit, or 2: Celsius. The next setting shows dates as either 1: M/D/Y or 2: D/M/Y.

The next setting changes the extension calculation to use 1: Cool Shipping calculations, or 2: Freezing Calculations.

- A) Toggle Light: if the light is off, this turns on the light. If the light is on, this turns off the backlight.
- *) Read Sample: This reads the current sample.
- #) Add Cal Point. This adds a new calibration point (See Calibration).
- 9) Exit Menu. Pressing ‘9’ at any time during the Display Menu function will return the unit to the ready to read state (*=Read).

Calibration

The Quick Check 2 comes pre-calibrated to measure undiluted equine semen (with an optional calibration for semen diluted 200:1) and normally no additional calibration is required. However, calibration for other animals or dilution ratios is possible. Up to four user customizable calibrations can be stored in the unit.

The Quick Check 2 uses an interpolated lookup table to enable accuracy over a wide range of semen concentrations without dilution. A linear or quadratic model can be made relatively accurate for low concentrations, however at high concentrations, both optical density and turbidity readings deviate from these

models. A table lookup approach gives a very accurate response despite these non-linearities.

Lookup Table Principles

Before attempting to calibrate the Quick Check 2, please take a few moments to familiarize yourself with the principles behind table lookup values.

Concentration vs. Reading

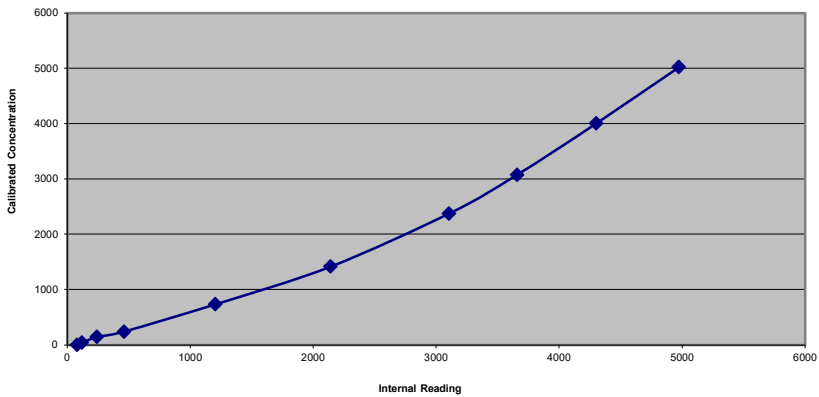


Figure 3: Example Calibration Curve

The graph depicted in Figure 3 shows the non-linear relationship between Turbidity and actual concentration. The points on the graph represent the table look-up values. Each table value consists of two values: the internal reading, and the corresponding calibrated measurement for that reading.

Table 1: Representative Lookup Table

Internal Reading	Calibrated Concentration	
80	0	Each value pair is selected so that a straight line drawn between two points in the table can be correlated to a calibrated concentration with very high accuracy. Each table in the Quick Check 2 can include up to 15 distinct points. A representative table is shown in Table 1. For internal readings that fall between the points on the table, the concentration is determined by interpolation.
120	41	
242	142	
462	240	
1203	735	
2141	1417	
3104	2373	
3658	3075	
4300	4003	
4973	5023	

The first value in the table must represent a zero reading.

The four customizable tables remain in memory even if the batteries and power are disconnected and can be used for several purposes:

- Calibration curves for up to four other species could be saved.
- Calibration curves for up to four dilution ratios could be saved.
- Or, the four calibration tables could be individually calibrated to portions of the full range of measurement, thereby creating effectively a single table with 60 calibration points.

Loading Calibration Tables

Only one calibration table is active at any one time. To switch between calibration tables, simply load the desired calibration table from memory.



Note: any changes which have been made to the current calibration table will be lost if a new table is loaded. If you want to save the changes to the current

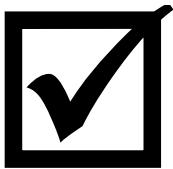
table, save the current table to one of the four available memory locations.

You can load a new calibration table whenever the unit is in the “ready to read” state. The display will have the text “*=Read” when the unit is in the ready to read state. The Quick Check 2 goes directly to the ready to read state on power up.

To load a calibration table, press the “4” key. The Quick Check 2 will display:

Table Number to
load?

Enter a number between 0 and 4 (inclusive) to select a new calibration table. Calibration table 0 contains the factory-calibrated table for each unit, and cannot be changed by the user.



If for some reason your calibration table has been corrupted (by inadvertently loading or deleting the current table), you can always re-load the factory calibration by loading table 0. Table 0 cannot be overwritten by the user.

If you pressed the “4” key inadvertently and entered the table load routine, you can exit by pressing the “*” key.

Saving the Current Calibration Table

Once you have a set of calibration points that you are satisfied with, you can save them to one of four user calibration tables to be recalled later. Even though the current calibration is retained when power is removed, any changes made to the current calibration are lost if one of the new calibration tables is loaded.

To save the current calibration table, press the “3” key. The Quick Check 2 will display:

Table Number to
Store?

Enter a number between 1 and 4 (inclusive) to select the calibration table to save to.



You cannot save to calibration table 0, as it contains the factory-calibrated table for the unit.

Note: Saving the current calibration table to a memory location will completely erase any current calibration information in the selected calibration table. **This cannot be undone.**

Displaying the Contents of the Current Calibration Table

You can review the contents of the current calibration table by pressing the “2” key. You can skip the extension protocol settings by using the “#” key until you get to the first calibration point, which will look like:

xx.xx	D=Del
yy.yy	#=Nxt

You can return to “ready to read” mode at any time by pressing the “*” key. Pressing the “#” key will show each calibration pair value in the current table. If no table values are present, you will be returned to “*=Read” after the last protocol parameter is shown:

The value represented by xx.xx is represents the internal reading units, the value represented by yy.yy is the corresponding calibrated concentration value for that particular internal reading. While the table entry is displayed, if the “D” key is pressed the current table value will be Deleted.

Adding Points to the Current Calibration Table

To add new points into the current calibration table, read the concentration of a known sample following the directions in the section: Reading Sperm Concentration. If the sample falls within the bounds of the current table, you will see the normal concentration and extender displays. Press the ‘*’ key twice to return to the ready-to-read display (*=Read). At this point, press the ‘#’ key. You will see the following display:

```
Concentration?:
```

Enter the known semen concentration in Millions of sperm per ml using the keypad. To enter a number after the decimal place, use the ‘*’ key to enter the decimal. End your entry using the ‘#’ key. For example, the number 234.5 (234,500,000 sperm/ml) would be entered by pressing the following key sequence: 2, 3, 4, *, 5, #.

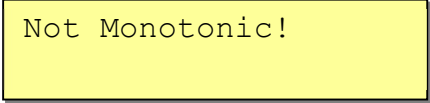
If the table already has 15 points, you will not be able to add another point without first deleting an existing table entry. If you attempt to save more than 15 points you will get the following error message:

```
Table Full. Del  
entry first.
```

Use the Display routine (“D” key) to delete a table entry, then you can add the new calibration point into the table.

The points in the Calibration table must be monotonically increasing. If you attempt to add a point to the calibration table

that causes the table to be non-monotonic you will get the following error message:



Not Monotonic!

If this occurs, the table value will not be stored. If you believe that the current sample count is accurate, then the current table values that occur near this reading may not be accurate. Review your table values using the Display routine (“2” key) to identify and delete the inaccurate entries.

Changing the Zero Point

1. Zero the unit by reading seminal plasma pipetted from a completely centrifuged semen sample. Alternately, a sample of straight formalin or distilled water gives a reasonable baseline reading.
2. Once the reading is complete, press the ‘*’ key twice to obtain the extender calculations. Ignore these values for calibration.
3. When the display shows the extender dilution amounts, along with the ‘*=Read’, press the ‘#’ key and enter ‘0’ for the concentration value. Hit ‘#’ to enter.

Quick Check 2 PC Software:

The Quick Check 2 software requires Quick Check 2 firmware v6.0 or higher. Please see the section below on Firmware Upgrades for details on upgrading your firmware.

The PC software has been tested on several machines, however due to differences between hardware configurations and operating systems, you may find compatibility problems. If this is the case for your system, please contact me at

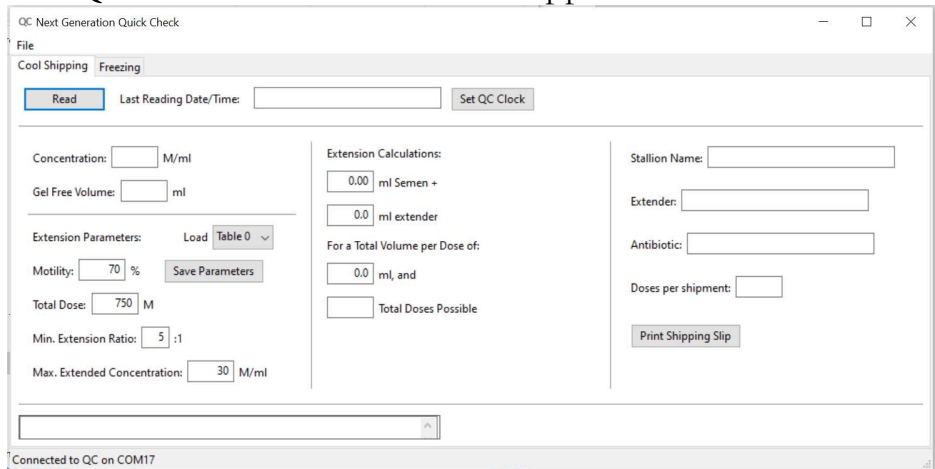
admin@primoponies.com with the problem you have experienced and details of your system configuration. I will attempt to update the software to resolve any issues found.

To use the PC software, download the setup file from:

<https://primoponies.com/Downloads/setup.exe>

Connect the Quick Check 2 to a USB port on your computer using the cable supplied. Windows should auto-detect the USB device

The Quick Check 2 program will be installed in the C:\Program Files(x86)\Quick Check directory. Start the program by double-clicking on the QuickCheck.exe program. The Quick Check 2 window should appear:



The Quick Check 2 should be automatically detected, and you will see a “Connected to QC on COMxx” message on the bottom left of the window. If the message does not appear, please double check your cable, and use File->Connect QuickCheck to rescan.

To read a sample, click the "Read" Button. While the unit is reading (the Quick Check 2 will indicate that it is reading), do not click any buttons or change any fields.

After the reading is complete, the software will calculate the proper extender ratio based on the minimum ratio specified. Any time you change the minimum ratio, the semen to extender ratio is recalculated.

If you enter the Gel Free Volume, the total number of Doses possible will be automatically calculated. As with the extender ratio, any time you modify the Gel Free Volume, the total number of doses will change.

QC Next Generation Quick Check

File

Cool Shipping Freezing

Read Last Reading Date/Time: June 01, 2023 05:45PM Set QC Clock

Concentration: 237.66 M/ml

Gel Free Volume: 45 ml

Extension Parameters: Load Table 0

Motility: 70 % Save Parameters

Total Dose: 750 M

Min. Extension Ratio: 5 :1

Max. Extended Concentration: 30 M/ml

Extension Calculations:

4.51 ml Semen +

22.5 ml extender

For a Total Volume per Dose of:

27.0 ml, and

9 Total Doses Possible

Stallion Name:

Extender:

Antibiotic:

Doses per shipment:

Print Shipping Slip

Connected to QC on COM17

To set the Quick Check 2 clock, use the Set QC Clock button.

To print a shipping form to your printer, click on the "Print Shipping Slip" button. A summary of the collected semen data will be shown in a new window. Use the print dialog to send to your printer. Any data entered in the boxes next to the Stallion Name, Extender, Antibiotic, and doses per shipment will also be printed on the shipping slip.

It is also possible to load different tables using the Load drop down, and any changes to motility, dose, min Extension ratio or

max concentration values can be saved back to the unit by using the Save Parameters button.

Specifications

Principle of Operation:	Four beam nephelometric, 90° / forward scatter. Thermal and ambient light compensation.
Range:	0 – 1200 M/ml (factory calibration – the unit is capable of reading higher with custom calibration)
Wavelength:	940nm
Sensitivity:	<0.2 M/ml
Calibration	15 point Calibration Tables: 1 Factory Calibration, 4 User Defined Calibrations.
Ambient Conditions:	32 – 120°F (0 – 50°C), 0 – 100% relative humidity, non-condensing
PC Connection:	USB-A cable.
Power:	9v battery or USB
Housing:	6.88" x 4.88" x 2.48" (174.8mm x 124mm x 63mm)
Display:	16x2 character backlit LCD
Weight:	2 lb./4.4 kg
Front Panel Instructions:	English, German, Dutch, French, and other languages (per customer request).

Warranty

What your warranty covers:

1. Defects in materials or workmanship.

For how long after your purchase:

2. One year from date of purchase.

What we will do:

3. Provide you with a new, or at our option, a refurbished unit.
4. The exchange unit is under warranty for the remainder of the original product's warranty period.

How to make a warranty claim:

1. Properly pack your unit. Include any cables, etc., which were originally provided with the product. We recommend using the original carton and packing materials.
2. "Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the product is within the warranty period, must be presented to obtain warranty service." Also print your name and address and a description of the defect. Send via standard UPS or its equivalent to:

Primo Ponies and Sporthorses

4808 East China Hill Road

El Dorado, CA 95623

1. Pay any charges billed to you by the Repair Center for service not covered by the warranty.
2. Insure your shipment for loss or damage. Primo Ponies and Sporthorses accepts no liability in case of damage or loss en route to Primo Ponies.

3. A new or refurbished unit will be shipped to you freight prepaid.

What your warranty does not cover:

1. Installation and calibration.

2. Batteries.

3. Damage from misuse or neglect.

4. Products that have been modified or incorporated into other products.

5. Acts of nature, such as but not limited to lightning damage.

Limitation of Warranty:

1. THE WARRANTY STATED ABOVE IS THE ONLY WARRANTY APPLICABLE TO THIS PRODUCT. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED (INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) ARE HEREBY DISCLAIMED. NO VERBAL OR WRITTEN INFORMATION GIVEN BY PRIMO PONIES, IT'S AGENTS, OR IT'S EMPLOYEES SHALL CREATE A GUARANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS WARRANTY.
2. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. PRIMO PONIES SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT OR ARISING OUT OF ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THIS DISCLAIMER OF WARRANTIES AND LIMITED

WARRANTIES ARE GOVERNED BY THE STATE OF CALIFORNIA. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE.

Index

A		
AI.....	9	
ambient	6	
ambient light.....	26	
antibiotics.....	9	
Artificial Insemination	9	
Artificial Vagina	9	
AV	9	
B		
backlight	8	
bacteria	9	
baseline	22	
battery	4, 5, 6, 7	
battery compartment	5, 7	
beam	4	
C		
calibration ...	4, 12, 16, 18, 19, 20, 21, 22, 26, 28	
Calibration	16	
Calibration curves.....	18	
Calibration Tables	18, 26	
centrifuging.....	11	
collection	9	
condensation	6	
contaminants	9	
cuvette.....	5, 6, 10	
D		
decimal	21	
dilution.....	22	
dilution ratios.....	16, 18	
display.....	4, 5, 6, 7, 8, 10, 22	
Display.....	21, 22, 26	
Display Menu.....	14	
dose.....	11	
E		
extender	9, 10, 11, 22	
F		
factory calibration.....	19	
Factory Calibration	26	
Firmware.....		8
formalin	10, 22	
FZ	11	
H		
hemacytometer.....	3	
humid	6	
I		
icon	3	
incubator.....	9	
internal readings.....	18	
interpolation.....	18	
K		
keypad.....	5, 21	
L		
LCD.....	5	
linear	16, 17	
lookup table	16	
M		
monotonic	22	
monotonically	21	
motility	11, 12	
N		
nephelometric	4, 26	
P		
PC	4	
points	17, 18, 19, 21	
port.....	4	
power	4, 5, 6, 7, 8	
power switch.....	5	
Protocol.....	12	
Q		
quadratic	16	

R

ratio..... 11
ratiometric..... 4
ready to read8, 19, 20
Rechargeable batteries 7

S

scatter 26
seminal plasma..... 22
SH..... 11
software 22
standard..... 8

T

teasing..... 11
temperature 4, 6, 9
turbidity 4

Turbidity 17

U

user calibration tables 19

V

version 8

W

wall transformer..... 7
Warranty26, 27, 28
washing..... 9
Web..... i

Z

Zero 22