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Firmware 19.5.5



Introduction

Keyboard and functions



Battery Recharge

To recharge the battery of the Baqueano reader you should only use the chargers (USB or 220V) that come in the case.

The USB charger is used to charge the reader from a computer, from a car, or from any other USB device.

In both cases when the device is charging you will see a red light on the charger. When the battery charge is complete the light will be green.

Fully charging the battery may take approximately 4 hours.

With a full battery charge you can take approximately 10,000 readings.



Micro tarjeta SD



Do not remove the SD card from the reader

Safety and maintenance instructions

- Read this manual carefully, it contains all the instructions for the correct installation and use of the Baqueano Pro and Pro S reader.
- Keep this manual for future reference
- The reader does not need maintenance
- Do not open the equipment. It has no user serviceable parts
- The equipment should not be charged with cables other than the original ones.
- If a cable is damaged, do not try to repair it, contact us for a



replacement.

• In the event of any malfunction, contact the Technical Support Service.

Initial setup

1. Power on and off

The reader is turned on and off by pressing the ON/OFF-Cancel button



When starting the reader for the first time, you must indicate the language and the country of use

Note: In the Settings menu, the language and country of use can be changed at any time.

2. Reader Display

When you turn on the equipment, after indicating the language and country of use, the reader goes to the starting point and you will see the following screen:





From this starting point you can access:

1. If you press the OK key, you access the reader's status query.

The display will indicate the following information:

- The Establishment where you are working (if applicable)
- The current session
- The number of Readings you did in that Session
- 3. Reader menu

If you press the 0 key, you access the Reader Menu.

In the menu you will see the following functions: Readings Settings



To move between the options you must use the keys 2,4,6,8.





Reader's Menu

READINGS		
TASKS	New Task / Close Task	Starts a predefined task in the reader
SESSIONS	New Session	Creates a new session
	Re Open Session	Open a session that was closed
	Readings/Session	Shows readings per session
NOTES	Edit List	Creates de notes whatever you want
	Name List	Name the list whatever you want
Continuous Mode		Start this reading mode
Manual Inputs		Enter an ID Tag manually
Backup		Backup all your readings on the SD card
Rows	Activate mode (Settings)	
	New Row	Creates a new row
	Re open	Open a previous row
	Readings/Row	Shows readings per row
	Disable	It disable row mode



SETTINGS		
BLUETOOTH	Search	Search nearby devices to connect
	Paired devices	Shows the list of devices that have already been previously found by the reader
	Delete devices	Open a session that was closed
ROWS	Activate menu	Enable the Rows menu in the Readings menu
COUNTRY		Select the country of use
CONTROLS	Country Control (Country Code number in ID tag)	YES / NO
	Animal Control (Animal species Code number in ID tag)	YES / NO
LANGUAGE		Select the Language
SOUND		Turn sound on or off
DATE & TIME		Shows the set date & time
ABOUT BAQUEANO		Indicates serial number, firmware version, hardware components version
ADMINISTRATOR	Scanner Config	Select different configs
	Change Date & Time	Set Date & Time
	PIN	1111 - Change and confirm
	RESET	MASTER FACTORY RESET



Work sessions

Work sessions with livestock are numbered by default as Session 1, Session 2, Session 3, etc. It admits up to a maximum of 50, without downloading the reader. However, they can be named at the time of their creation, or in the sessions menu.

Once you have selected the Establishment (if applicable) in which you are going to work, the reader allows reading in different Work Sessions.

"Session 1" is created automatically. All the readings you take will be saved in Session 1, until you select or create a new session.

New Session

In menu **Readings> Session> New Session**, you can create Session 2, and so on. If you have a Task started (see Tasks chapter) when creating a new Session you will have to start the Task again, so you will be asked if you want to keep the task started or if you prefer to close it.

Reopen Sessions

In the menu **Reading> Sessions> Reopen session**, you can reopen any session that you have used previously to add new readings to it.

Naming Sessions

By default the sessions are numbered (1,2,3 ...), but in this option of the **Reading menu> Sessions> Rename** you can name them as your wish.

• View readings from a Session

In the menu **Readings> Sessions> Readings made**, you can see the amount of readings made in each work session.

You can also see each reading, with all its information.



Readings

It is not necessary to press and hold the read button (YELLOW BUTTON). By pressing it once, the reader tries to read a tag for 10 seconds. As it tries, the red light on the keyboard turns on.



When the reader identifies a tag, the red light turns off and the green light turns on





• Continuous reading

The reader has a continuous reading mode, in which tags can be read without pressing the read button.

Continuous reading is activated by pressing the yellow read button and then the OK key.

On the screen, you will see the message "Continuous reading started".

The red and keypad light will remain blinking. Every time a tag is read, the green light will come on.

To disable continuous reading, press the Cancel button.

You will see the message "Continuous reading stopped" on the display.

Note: To download readings install the Readings Manager - Check on our Youtube Channel

• Manual EID entry

In case the animal does not have electronic tags, or it is not possible to read it, the ID number registration function can be used using the reader's numeric keypad (manual ID input function).

Procedure:

1) Press the Manual Read Entry key (key 1)

- 2) Enter the identification number (ID) of the tag with the numeric keypad
- 3) Press OK

4) You will see in the reader's viewer the number entered with an M next to it (indicating that it was read manually)





Functions on a reading

If you press OK when a reading is being shown on the display, you access the Information Detail of that reading:



- OFICIAL ID ELECTRONIC TAG
- DATE HOUR OF READING
- SESSION



With the down arrow you can navigate to see all the information pages that the reading has.

If you press OK again (on the Detail of the reading), you access a menu of functions on it:

1. Task Actions

To see this you must have a Task started.

By selecting this option you can choose any of the actions of the Task, to repeat the action, and thus modify the record of a characteristic, or make a query again, for example.

2. Enter Notes/Attributes

The notes/attributes are descriptions that you want to give the animal or a treatment that is done to it.

Attribute lists must be created in the reader.

Within this option you can register up to 3 attributes to the selected animal.

3. Enter Observation

As a Reading Observation, you can write whatever you want, in a maximum of 14 characters.

4. Delete reading

Selecting this option with OK, the reading is deleted. A deleted reading is not recoverable, therefore it requires a confirmation, and it is not possible to delete multiple readings either.

5. Reading Backup

The Backup Readings function, in the **Readings> Backup menu**, consists of moving the readings of all the Sessions, from the reader's working memory to the micro SD card.

After making the backup, a new Session is created.





Readings backed up on the SD card will not be accessible from the reader. It will no longer appear on the display.

You will only be able to see them after downloading them with the Reading Manager in your PC

Note: The purpose of backing up readings is to free up space in the reader's internal memory. If the limit of the internal storage capacity (5,000 readings) is reached, it is advisable to back up the readings on the micro SD card (allows to store more than 1,000,000 readings). It is also a way to protect the readings for the download process to the PC against possible power outages or unexpected changes in the electrical voltage.



Tasks

Default Tasks are sequences of actions (registration, consultation, alarm) that the Pro and Pro S reader can do automatically after reading the tag of each animal. **Tasks are already predefined in the reader.**

Default Tasks

There are 4 Tasks that are included in all Baqueano Readers models named **Send EID**, **WEIGHING (KG), Kg + ATTRIBUTE, USE ATTRIBUTES**. This will always be available in the reader, in addition to other default tasks depending on the model, and the ones you might configured in the Tero system (as long as you have a Tero account).

The **Send EID** Task involves sending the information of each tag instantly after reading it, via bluetooth, to a scale, cell phone application or PC.

The **WEIGHING** Task (KG) involves recording the weight (whether it is entered by keyboard or by bluetooth, from a scale) after reading the caravan.

The **Kg** + **ATTRIBUTE** Task implies the weight record + the possibility of adding characteristics to the animal.

The **USE ATTRIBUTES** Task involves registering up to 3 attributes per animal by using the attributes lists.

• Start a Task

When carrying out a session with animals, one of the tasks described in the previous item can be carried out; it can be programmed in Tero or the predefined tasks that the reader has.

To perform a Task you have to Start the Task in the menu:

Readings> Tasks> Start task, selecting the Task you want to start with OK.

Once a Task is started, after reading a tag, the reader will automatically execute the Task actions.

After finishing the activity with the animals, you can simply turn off the reader with the red button. It is not necessary to finish the Task.



• Attribute Creation

To create or edit Attributes it is necessary that the SD card is inserted

The attributes are descriptions that you want to give the animal or a treatment that is done, for example:

- body condition
- reproductive status (pregnant, empty)
- dosage of a medical device
- or any other feature that the user needs.

Attribute lists must be created in the reader.

You can create up to 3 Attribute lists (each with 24 characteristics).

In the menu Readings / Attributes / you will see the following image:



With OK you enter each of the lists and with the reader's keyboard you can edit the name's list or the value for each attribute. By default it will be catalogue as A, B, C, D, etc.

Example:

- List 1 Reproduction a - Pregnant b - Empty
- c Cycling
- List 2 Sanitary
- a Brucelosis
- b Aftosa
- c Minerals



This will create 2 of the 3 lists that you can edit.



When starting the Use Attributes Task, the reader will behave as follows:

It will show you on the screen the 3 lists created, and you will have to choose which of the 3 lists are going to be used (you can select 1, 2 or the 3 lists).

You must do it in the order that you are going to use them.

Once the lists have been chosen (let's continue with the previous example), in this case we choose only the List 1 that we call Reproduction and List 2 that we call Sanitary, so we will not use the List 3.

Every time you read an animal, the reader will show you on the screen (automatically), first the characteristics of List 1 to let you choose the correct attribute for the occasion.

- a Pregnant OK
- b Empty
- c Cycling



And then it will show you the features you edited from List 2

- a Brucelosis
- b Aftosa OK
- c Minerales



Thus, the animal read will be left with the following record: Pregnant cow Aftosa vaccine applied.



• Recognition

This function is used to recognize or separate previously selected tags. It is used a lot to separate animals either to sell them, to give them a specific treatment, for stock control, etc.

To operate in the Recognition Task, you can send to the reader different lists with ID numbers that you want to recognize using the Readings Manager on your PC.

Once those lists have been sent you should begin the Recognition Task in the reader by the menu: **Readings / Task / Start Task / Recognition**.

When you read a previously loaded animal the reader will sound and vibrate different and you will see in the display the message "Found in list X"



When the reader is working in the Recognition Task, you will still be able to read tags that have not been previously loaded.

This "New" reading will be read and saved as a normal reading but marked as a new one, separeted from those that has been recognized.

When these readings are downloaded to the Manager you will see a complete report of your Recognition Task, which means, those found, those still missing, and those that are new animals in relation to the list used (see GLB manual).



Work in Rows

When doing an activity with animals, you can choose to work in **Rows Mode**. It consists of making groups of animals called sleeves, where each animal is in a correlative fixed position. (Dairy farms)

We recommend using this mode when working with the Reader Pro S, in dairy farms, milking parlors, or in pens where animals cannot be moved, and for performing dairy and / or bleeding control tasks.

Working in rows allows you to make some records in a more practical way:

1. You can make registrations alternately. You can read all the animals in the Row and then indicate one of them by its order number, to identify it and associate the sample while ignoring the others, thus being able to alternately associate the samples for control.

2. You can make sequential registrations. You will be able to read all the tags and then surround the animals to take the sample from the back, without having to read again, to make it more comfortable. To access this type of record, it is necessary to activate the sequential mode in the advanced options of the tasks, in the programming of them in the Tero. (See the Tero manual).

Up to 256 Rows can be made and in each Row you can have up to 99 animals.

In the reader you will see up to 2 Rows. You will always have access only to the last 2 activated Rows. The previous ones, once they are closed, will be saved on the mini SD memory card.

The operation is as follows:

1. If you have a PRO reader, you must activate the Rows menu in **Settings> Rows (or Mangas) Menu> Enable.** If you have a PRO S reader, the menu is enabled by default.

2. Next, go to the Readings Menu> Rows> Activate Row

3. This will display a new menu with the options: New RowReopen priorReadings / RowDisable Row



4. **Select the New Row option**. From here all the readings you do will be included in this Row, remember the limit is 99 animals for each one.

5. **Select the task** to be executed with these animals (optional: we recommend that the task be started at this time, but it can be started before opening the Row or after closing it).

6. **Begin to read the animals**, each one will be assigned a correlative number according to the position in which it was read, starting with 01, then 02, 03 and so on.

7. **After you finish reading the animals, press the "6"** button on the keyboard to close the Row.

8. **Begin the task** of your choice (point 5).

9. The viewer will ask you to **indicate the animal number** (consecutive order) for which the information will be recorded.

10. Enter the number of the desired animal (01, 02, 03, etc.) on the keyboard.

11. Enter the information for this animal.

12. After the successful registration notice, you can insert a new animal number by repeating the process.

13. To finish the job, press the "Cancel" key (red "X").

Here's more on sequential operation

It is useful to work in this mode on certain occasions, such as in Dairy Control activities, for example.

In dairy control, 2 characteristics are recorded:

- 1. Bar code of the milk sample of each cow
- 2. The milk production of each cow in litres

The barcodes of each milk sample, can be sequentially engraved on the cows in a Row, from first to last, by digitizing the barcode on the label of each sample tube, one after the other.

The procedure would be as follows:

Start the task DAIRY SAMPLING in Readings/Tasks/Start Task/ Dairy Sampling Open a New Row.

Read all the tags of the cows in line and complete (close) the row.

Start the sampling registration by reading the barcodes of the bottles of the



milk samples with the scanner (red back light), digitizing one after another, starting with the bottle corresponding to the first cow (01) on the row. In this way, each cow will have its corresponding sample code registered.

Next, the milk production record of each animal is carried out, and there as each one finishes the milking at different times, the income is individualized in regarding the order of registration, having to mark the order number (01, 02..07...12..21) of the animal in the row line to document your productivity in liters.

Decimals can be indicated, moving after the point (example: 12.5) using the number 6 on the keyboard (right arrow) by holding it down, and 4 (left arrow) in the same way. Once all the animals have been completed, the reader will indicate on the Row screen "END". Thus a new row can be opened by pressing the number 6 in this screen.

Work with 2 active Rows simultaneously

A Row remains active as long as the Task can be carried out to the animals that make it up. The last 2 Rows that have not been completed are the active Rows, that is, the animals in those Rows can perform Tasks such as Dairy Sampling or Scan Samples.

It may be practical to define and complete 2 Rows (for example, 2 rows of cows during a milking), and then perform the Task on the animals in both Rows.

With the left and right arrows, you can move from one Row to the other in the Row Screen, to carry out the Task for the animals in each one.

Barcode Scanner

The **Baqueano Pro S** reader has a barcode scanner, with which you can register codes for milk or blood samples.

When a Task has a scanned sample registration action configured, for example, the Pro S reader will automatically turn on the scanner to be able to scan the code, when it is time to perform the Task (after having read the tag when working in Normal mode, or after completing the Row, if working in Row Mode is on).

Note: in the Administrator menu, you can configure scanner settings; we recommended barcodes with Interleaved 2/5 format to be used.





Bluetooth

The Baqueano Pro / Pro S reader has Bluetooth connectivity to connect with electronic scales, cell phones and PC apps, among other devices.

• Connection to Scales

To establish the bluetooth connection with an electronic scale for the first time, you must Search the scale from the **Settings> Bluetooth> Search** menu. The scale must have bluetooth connectivity, be turned on, and have bluetooth visible.

After a few seconds, the reader will display all the devices found on the screen. You must choose the device corresponding to the scale.

(Ex: the bluetooth of the Vesta balance will be displayed with the name "Vesta")





Next you will indicate that the selected device is a Scale.

Then you will click on its brand *, model, and the communication method (when the scale has more than one form of communication, such as receiving the caravan on the scale or send the weight to the reader **).



After selecting the model of the scale, you must select for example "Single reception" thus that the weight passes directly to the reader.

* To connect with a scale that does not appear in the list of scale models that the reader displays, you must select the "Generic" scale option. The balance must operate according to the protocol established in the Baqueano Pro or Pro S reader's Technical Data Sheet.

(Check it on: http://bqn.com.uy/soporte-lector-baqueano-pro/)

In case you cannot establish the connection of the Reader with a mobile application, you will have to contact the provider.

** Whenever the scale allows it, it is recommended that you send the weight to the reader, thus that all the records are centralized in this device.



When the communication is established, the confirmation message will be displayed on the screen and the blue light will turn on, which will remain on for the duration of the connection.

The reader will suggest the start of the tasks that have actions that will use the bluetooth connection to record weights or to Send EIDs, as appropriate.

Ex: Once the connection with the Vesta 3506 scale has been established and the Weighing task has started (with the action of recording the weight and calculating the daily gain), when reading the tag of each animal, the reader will save the weight it receives from the scale, and will then calculate the average daily gain from the previous weighing.

To disconnect the reader from the balance, you must select the menu function: **Settings> Bluetooth> Disconnect.**

With the menu function **Bluetooth> Paired devices**, you can see the balances and other devices with which a connection has ever been established. By selecting one of them, the reader will try to reestablish the connection with that device

Note: After connecting to a scale for the first time, it is not necessary to repeat the Find the scale procedure. When you start the reader, it will automatically try to connect to the last scale it was connected to.

• Connection to mobile applications or PC

Connect to Baqueano APP

Baqueano currently has a mobile application (Baqueano App) available for Android / IOS operating systems communicating by bluetooth with Baqueano readers.

To establish the connection with the Baqueano App you must turn on the bluetooth of your mobile phone and the GPS.

Then in the reader, go to the menu **Settings / Bluetooth / Baqueano App / ok**. Then open the app and click the **Connect button**.



You can connect your reader to the Baqueano app in order to download and view your readings, and then share them.

Connect to other apps and PC

However, you can connect your PRO/PRO S reader with other applications.

To establish the bluetooth connection with a mobile application for the first time, you must Search for the mobile from the function in the **Bluetooth> PC/APP.**

After, you must select the connection mode, between options: **Standard or Keyboard.** The first will send the ID Tag Number in standard format, as indicated in the product sheet. If the Keyboard is selected, the equipment will send the number pretending to be a keyboard connected to the other device, with an Enter after the number.

The mobile must have bluetooth turned on and visible.

After these selections, the Reader will search nearby devices, and after a few seconds, the reader will display the mobile (and any other device) found on the screen.

You must choose the mobile with which you want to establish the connection.

On the mobile, a message will appear indicating that a device tries to establish a bluetooth communication, and will request the entry of the bluetooth pin of the reader. Thus You must enter the pin indicated by the reader, by default is 1111 or 1234.

Once the connection is established, the mobile will assign the port number. The application must communicate with the reader through that port *, and operate according to the protocol established in the Baqueano Pro or Pro S reader's Technical Data Sheet.

(Check it on: http://bqn.com.uy/soporte-lector-baqueano-pro/)

In case you cannot establish the connection of the Reader with the mobile application, you will have to contact the provider of the same.

When the communication is established, the message will be displayed on the reader's screen and **the blue light will turn on**, which will remain on for the duration of the connection.

The reader will suggest the start of the tasks that have actions that will use the bluetooth connection to Send EID Tags numbers in real time. You must select one.



Ex: once the connection with an application has been established and the task of **SEND EID** in real time has started, after reading the tag of each animal, the reader will send the caravan to the application.

To disconnect the reader from the mobile, you must select the menu function **Settings> Bluetooth> Disconnect**

After connecting to a mobile phone for the first time, you will not need to repeat the Search for mobile procedure. When you start the reader, it will automatically try to connect with the last mobile it connected with.

With the menu function **Settings> Bluetooth> Paired devices**, you can see the scales and other devices with which a connection has ever been established. By selecting one of them, the reader will try to reestablish the connection with that device.