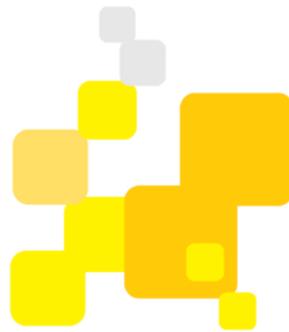


# SMS SCALES

## -INDICATOR-

### SMART SCALES FOR BEEKEEPERS

[www.smsscales.com](http://www.smsscales.com)



**Manual for adjustment and use SMS Scales.**

Version of document 2.84

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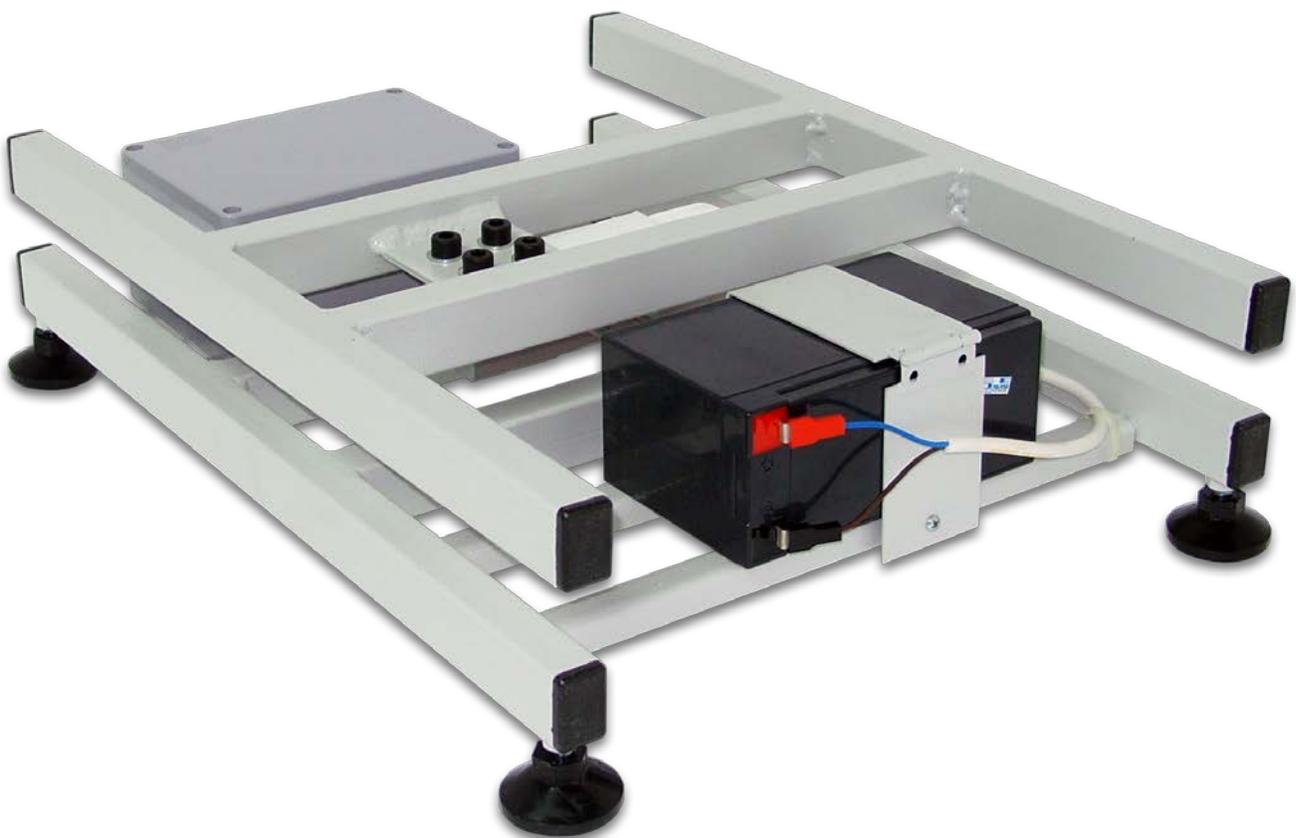
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## WHAT IS SMS SCALES INDICATOR?

SMS Scales Indicator (from here referred to as SMS Scales) is a specialized electronic device for measuring weight, especially in beekeeping. With its functions SMS Scales represents the best device that allows a beekeeper to, at any time, read honey yield through manual display or text messages. (Because of its capabilities SMS Scales is the best device that a beekeeper may at any time by manually display or text messages read honey yield.) SMS messages, other than weighing, can convey other data, such as getting warnings about apiaries security, and all this from the comfort of your home.

Currently, the market offers the second generation of scales with some new additional features (twice tare, notification on the battery status ...), therefore our SMS Scales Team works on constantly designing new features and listening to the needs of beekeepers. Our SMS Scales constructors are always open for suggestions and proposals of its users.



## PARTS OF SMS SCALES

Each SMS Scales is constructed of parts that make up the primary (basic) version, without which the SMS Scale will not work (at least according to beekeepers needs).

The main parts of the scales are:

- **The construction**, consists of 2 metal bars H-shaped, with a measurement cell in the middle. The lower bar contains holders for a box with electronics and a battery, and on the lower side fuses are screwed for leveling the scale. At the ends of the construction, metal seals are placed to prevent moisture from getting inside.
- **Waterproof box with electronics**, contains the "brain" of SMS Scales, electronics with software and module for SIM card. Electronics are connected to measuring cell with a cable.
- **Load cell**, located in the central part of the SMS Scales in order to have accurate measuring. Depending on the wishes of the customer it can measure up to 120, 240 or up to 360kg of cargo.

Without these parts SMS Scales would not be able to function. There are also accessories that can be purchased if required, making SMS Scales easier for use. Accessories are:

- **The pan**, made of thin tin with a small door at the back which enables easier access to electronics and the battery. On the lower side of the pan there are specially designed sockets which fit the construction of the scale and the rubber in the socket that prevents it from sliding. The pan also has a protective role shielding the other parts from precipitation and dust.
- **The hand display**, used for reading honey yield on the spot with a cable connected to the SMS Scales.
- **Gel battery**, are small in size so they can fit into the structure of SMS scales between the grid. During normal use, and warmer ambient temperatures it can last about 25 days on a single charge. These batteries are selling as a service, but they can also be purchased with any other batteries sellers. With them, we provide a guarantee from the distributor.
- **Chargers for gel batteries** complement our range even though selling this kind of products is not with activity. We sell them as a service, but such gel batteries can be purchased in all specialized stores.
- **Solar panel**, which provides continuously power for battery of SMS Scales.
- **Sensors for:** alarm, external temperature and humidity, temperature inside bee hive

## PREPARATION OF SCALES FOR USE

To operate the SMS Scales needs a SIM card, the same one used in mobile phones. SIM cards are not included with the SMS Scales, but the buyer has the option of buying the card of his choice. SMS Scales can be used with the card of any mobile operator in the country and abroad.

Before inserting SIM card into SMS Sales it is necessary to be activated if it is new, and the PIN code needs to be deactivated. Activation is performed under the direction of the mobile operator. SIM card is inserted in the designed place on the electronic board housed in a plastic waterproof box. Carefully turn the plate and insert the SIM card, bring back the plate and hand tighten the nut.

When the SIM card is inserted in the electronics of SMS Scales, the previously charged battery is connected, paying attention to connect the blue wire + and the brown -. When the power is on, on the electronics LED diode is on flashing each second, which means that the scale is looking for GSM network. After 30 seconds the instrument is connected to the mobile network operator and the LED flashes slowly (once every 4 seconds). This means that it is ready to use, therefore you can close the box.

With Your mobile phone call number that is inside SMS Scales and it will remember Your number as a User. With other numbers SMS Scales will not communicate, and in the phonebook of SMS Scales SIM card you can add as many as you want Users by sending an SMS message, which will be discussed later.

For measuring accurately it is necessary that SMS Scales is on a hard surface, and its position needs to be flat. This is achieved with lugs on the bottom of the construction, adjusted as desired, leveling the scale vial and tightening the lug nuts. Now the scale is ready for use.

With SMS Scales you can buy a gel battery, which is pre-loaded. Due to the use battery discharges and needs to be recharged periodically. Charging is done using specialized chargers. These chargers can also be bought from us.

If you use car batteries they can be charged with a standard car charger. When charging, pay attention to the polarity of the terminals. Wrong connection can permanently **damage the battery.**

## WORK WITH HAND DISPLAY

In addition to mobile phone tare, weighing scales can be done with hand display. The advantage of the hand display display is the possibility to read a large number of scales on the apiary without spending balance for SMS messages.

The display is small and it is connected to the SMS Scales with ordinary network cable (provided with the display). When the cable is inserted into the connector on the plastic box you get an overview of all segments of the display (8.8.8.8.8.) in a second. This is followed by presentation (.....), indicating that the display is ready for use.

If you want to turn off the display but not to physically disconnect the cable, you can by pressing the button for 3s - 4s, and then releasing the button. You can turn on the display in the same manner. If the display remains on the cable, after 3 minutes of inactivity it turns itself off, so it does not affect the life of the battery.

## TARE SCALES BY HAND DISPLAY

When the SMS scale is set to the location where it will perform the measurement tarring is necessary. It is best to tare the scale when beehives is installed with semi-extensions in order to measure the pure yield of honey.

SMS scale actually measures the GROSS weight which is the sum of TARE and NET weight. TARE represents the whole burden on the measuring cell - the upper part of the structure, hives, semi-extensions... In this case, the NET represents the weight of the honey, that is the weight of the yield.

$$\text{GROSS} = \text{TARA} + \text{NET}$$

To measure only the NET, or just the honey, we need to TARE. TARE handheld display is done in the following way:

Turn on the display. Hold the display for longer than 5 seconds, and then release the button. The display shows "- - - -" (which means that the measurement is in progress). After a few seconds you get a TARA value.

If you are not satisfied with the measured TARA value (due to tolerances in the measurement), repeat the process. TARA always has a minimum value as the weight of the metal construction of SMS Scales. After the measurement, the TARE value will be stored in the memory of the instrument. From this moment on, all measurements will be a NET measurement.

## MEASUREMENT BY HAND DISPLAY

The primary function of SMS Scales is weighing. You can measure the yield of honey without the use of SMS messaging with hand display. This is done in the following way:

Turn on the display. Hold down the display button between 0.5s -2s then release it. The display shows (- - - -), which means that the measurement is in progress. After a few seconds you get the NET value (if the scale is tarred), otherwise you have the value of the GROSS.

**NOTE: If the measurements of the same cargo weight are performed successively, it is possible to get results with different values. These values may vary in the range from - to + 25 grams of a cell out of a maximum 120 kg, - + 50g for a cell of 240 kg, and -+100g for a cell of 360kg, which is the prescribed value of tolerance.**

## WORKING WITH SMS

Working with handheld display does not consume balance of the SIM card and it is free, but has certain limitations that can not be improved or resolved in some other way (eg beekeeper has to measure the yield on-site, a less expensive and simple text display scales cannot provide some data except for the current weight of honey...). With the SMS messaging such restrictions do not exist, and the SMS messages can provide a range of other parameters other than weight measurements, and this is the direction in which the SMS Scales Team constantly adds some innovations.

## CONFIGURATION COMMANDS FOR SMS SCALES

**NOTE:** SMS commands are written in capital letters, from the beginning of SMS message. All the messages that do not meet the prescribed format will be automatically rejected, and the client receives an SMS with the content: **UNKNOWN COMMAND**.

RESETTING – It is possible to reset SMS Scales at any time, to default settings by sending command: **RESET DEFAULT**.

ISO – SMS Scales is the only device that has option for beekeeper to choose language for commands and reports. That can be achieved by sending command ISO and international two letter abbreviation by ISO 639-1 standard.

### **ISO xx multilanguage**

*Format for sending SMS messages:*

ISO [space] [ISO 639-1 two letter abbreviation]

**Example SMS:**

**ISO[space]en**

ID - Identification number of scales. Beekeeper gives a serial number of balance with SMS, It helps to not get confused if there are several SMS Scales.

### **ID identification number of scales**

*Format for sending SMS messages:*

ID [space] [ID number of 5 characters]

It is recommended that the ID number is in the format ID, then three digits ranging from 001

**Example SMS:**

**ID[space]ID001**

APIARY - of cargo also helps the beekeeper to avoid confusion, it allows that in every text message the measured weight is written together with the yield of a bee colony.

**APIARY the name of the honey farm**

*Format for sending SMS messages:*

APIARY [space] [name of loads up to 15 characters]

It is recommended that the name be the name of the colony in which the yield of honey is measured

**Example SMS:**

**APIARY**[space]**MyApiary A1**

LOCATION - location name is where the scale is located, if the beekeeper has several bee hives that moves to different locations.

**LOCATION name of the site where the scale is**

*Format for sending SMS messages:*

LOCATION [space] [location name up to 20 characters]

It is recommended that the location is the name of the place where there the apiary is

**Example SMS:**

**LOCATION**[space]**Mountain 2**

ADD NUMBER – adding new User by SMS. At old version of SMS Scales beekeeper needed to put SIM card in mobile phone to memorize User by himself, but in this version it is possible to add new Users by SMS ADD NUMBER command. Beekeeper can contact SMS Scales Team that they add User instead.

**ADD NUMBER adding User**

*Format for sending SMS messages:*

ADD [space] NUMBER [space] [mobile phone number 06xxxxxxx]

**Example SMS:**

**ADD**[space]**NUMBER**[space]**063111000**

SMS command ADD NUMBER1 063111000 will this number put in 1. place in SIM card phonebook, which means that he will always get alarm notifications.

DELETE NUMBER X – will erase specific phone number from SIM card.

**DELETE NUMBER deleting User**

*Format for sending SMS messages:*

DELETE [space] NUMBER [space] [specific mobile number 06xxxxxxx]

**Example SMS:**

**DELETE**[space]**NUMBER**[space]**063111000**

DELETE ALL – erasing all Users from SIM card

**DELETE ALL** deleting all Users

*Format for sending SMS messages:*

DELETE [space] ALL

**Example SMS:**

**DELETE[space]ALL**

USERS – command for listing all Users from SIM card.

**USERS** shows all User numbers from SMS Scales SIM card

*Format for sending SMS messages:*

**USERS**

NOTIFICATION – when the beekeeper send some command that does not perform immediately, SMS Scales will send a “OK” if it understand command, or “Unknown command!” as a sign that the beekeeper was probably typed something wrong.

If You don't want to receive notifications send:

**NOTIFICATON[space]0**

If You want to receive notifications send:

**NOTIFICATON[space]1**

REGIME – defines the working regime of SMS Scales. As we wrote before, it is possible to SMS Scales corresponds to the particular phone numbers, and ignore others (private regime) or to corresponds to any number (public regime). It's reccomend that this option does not change the unnecessarily. If You set value 0 any number that calls SMS Scales will receive SMS-Measurement. This is public regime of working. It is useful if You want to publicize Your informations. If You set value 1 only Users from SMS Scales SIM card will receive SMS-Measurement. This is private regime. Default value is 1 (private regime).

**REGIME** regime of working

*Format for sending SMS messages:*

REGIME [space] [0 or 1]

If You want public regime send:

**REGIME[space]0**

If You want private regime send:

**REGIME[space]1**

APN – for working of some services such as gprs, etc... it is necessary to set Acces Point Name (APN) by sending one SMS like this one (this is example for some mobile operators in Serbia, the beekeeper needs to set mobile operater APN from his own SMS Scales SIM card):

**APN[space]gprswap** – for Telekom

**APN[space]internet** – for Telenor

**APN[space]vipmobile** – for VIP

MODE – there are 2 different working modes, first that SMS Scales is always available for measurement, and second that SMS Scales is in sleep mode, and sending 1 SMS per day with 4 measurements during that day. The beekeeper can by SMS set MODE1 od MODE2.

Command MODE1 makes SMS Scales always available for measurements by calling. It is default mode. The beekeeper can at any time change MODE1 to MODE2 by sending SMS.

If You want measurement by calling send:

**MODE1**

If You want sleep mode and daily report send:

**MODE2**

TIME MEASUREMENTS – before the beekeeper switch SMS Scales to MODE2 it is necessary to setup times of daily measurements. It will do by message:

**TIME MEASUREMENTS hours of daily measurement**

*Format for sending SMS messages:*

TIME [space] MEASUREMENTS [space] [hours xx,yy,zz,ww]

**Example SMS:**

**TIME[space]MEASUREMENTS[space]07,11,15,19**

And xx, yy, zz, ww are hours in which SMS Scales will do measurements. In case that beekeeper forget to send this SMS, default times are 08,12,16 and 20 hours. After last measurement SMS Scales will send daily report by SMS or e-mail.

When SMS Scales is in sleep mode autonomy of battery is 3 times longer than in MODE1. Beekeeper can a half an hour after receiving daily report change times of measurements for tommorow or to change MODE2 to MODE1. This can be done by sending command MODE1.

DAILY – command that allows to daily report from MODE2 be send to all Users, or only first User. If beekeeper wants to all Users receive reports in MODE2 he need to send SMS DAILY 1, or if he wants daily report only for himself DAILY 0.

Daily report for only first User:

**DAILY[space]0**

Daily report for all Users:

**DAILY[space]1**

When the beekeeper gets a daily report in MODE2, the message looks like this:

*Format for sending SMS messages:*

**[ID number] – [NAME]**

Location: **[LOCATION name]**

**[measurement hour]: [NET], [Sis. temp.]**

TARA: **[value in kg]**

**Example SMS:**

ID001 – MyApiary A1

Location: Mountain 2

09h: 10.02kg, 23C

12h: 10.04kg, 21C

15h: 10.05kg, 21C

17h: 10.07kg, 22C

TARA: 5.67kg

GSM Signal: [value in increments]  
Battery status: [value in increments]  
[date and time]

GSM Signal: 30 (7 to 31)  
Battery status: 5/5  
2014-02-18 17:01:52

E-mail daily report includes the SIM card balance status, because SMS would be too long.

REPORT – by this command beekeeper chooses whether he wants to receive SMS, E-mail or both reports. Default is SMS report, and beekeeper can choose by sending SMS command:

**REPORT**[space]**SMS** – if he wants only SMS report  
**REPORT**[space]**EMAIL** - if he wants only e-mail report  
**REPORT**[space]**SMS-EMAIL** - if he wants both

Sending e-mail can also be charged at the price list of mobile operators, usually it is very cheap.

If the beekeeper wants to receive only **FTP** report, he can turn off other reports (SMS, EMAIL) by sending command: **REPORT OFF**.

## TARE SCALES BY SMS

In the chapter about the work of hand display, we explained how to tare scales. Here's how to do that with SMS:

**TARA** (text must be typed from the beginning of SMS messages in large letters)  
After few seconds You receive SMS with TARA value

### Adding new TARA to existing TARA:

TARA1 – in SMS Scales there is a possibility of adding new TARA to existing TARA. This option is used when adding new weight to a hive. It can be done using the commands TARA1 and TARA2.

### How the system works:

Suppose you already have hive where there is a extension full of honey. You might want to add a new extension and that weight of the extension does not “count” in the **NETO**, but in the **TARA** value. This will be done simply by sending an SMS with commands **TARA1** and **TARA2**.

Command TARA1 starts the process of adding new weight, command TARA2 ends it. This means that by sending a message with the text **TARA1**, you are freezing the current **TARA** and **NET** on the scales. When you insert a new extension and close the hive, you are sending an SMS message with text **TARA2**. At this the Scales measures the entire hive, and the difference

in weight originated from new extension, and converts in to **TARA**. New **TARA** then, is a sum of old **TARA** before adding extension to the hive and weight of the new extension.

1. Before adding extension send TARA1.
2. Add extension in deadline of 10 minutes. If You don't make it, command TARA1 will be canceled, and measurement will be like it was before.
3. When You finish adding new extension send SMS TARA2.

*Send SMS:*

**TARA1**

(within 10 minutes add new extension to the hive and return cover)

*Send SMS:*

**TARA2**

SMS Scales Vaga perform control measurement and beekeeper receives a message with a new TARA, new weight included

*Example SMS:*

ID001 – MyApiary A1

Location: Mountain 2

NET: 77.82 kg (+-25g)

TARA: 8.34 kg

GSM Signal: 21 (7 to 31)

Sis.Temp: -6C (-30C to 80C)

Battery status: 5/5

**Note:** Adding a new extension to the hive needs to be done no later than 10 minutes from sending the first message with text **TARA1**. Otherwise, the SMS Scales will not remember weighing **NET** and **TARA** measured before posting **TARA1**.

## WEIGHING WITH SMS OR FREE CALL

Place the weight on SMS Scales pan which must first be aligned, centered and tarred.

Weighing can be performed by sending an SIM message: **MEASURE**.

Other way is calling the SIM card inserted in the Scales to which it will respond with an SMS message. This call is free of charge and better for beekeeper than sending SMS.

Immediately after the call, SMS Scales will "ring" 2 times, then reject the call. As the conversation is not established, the call will be free of charge. After a few seconds, you get a

return SMS message, which hereinafter is called **SMS-measurement.**, with the following information:

<p><i>Format for sending SMS messages:</i>  <b>[ID number] – [NAME]</b>  Location: <b>[LOCATION name]</b>  NET: <b>[value in kg]</b>  TARA: <b>[value in kg]</b>  DI: <b>[value in kg]</b>  GSM Signal: <b>[value in increments]</b>  Sis.Temp: <b>[value in increments]</b>  Battery status: <b>[value in increments]</b></p>	<p><i>Example SMS:</i>  ID001 – MyApiary A1  Location: Mountain 2  NET: 77.82 kg (+-25g)  TARA: 5.86 kg  DI: 3.76kg  GSM Signal: 21 (7 to 31)  Sis.Temp: -6C (-30C to 80C)  Battery status: 5/5</p>
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### What do the other parameters mean?

**DI** - daily income represents honey income during 24 hours. Default measurement time is 6am to 6am, but the beekeeper can setup other time by this command:

*Format for setup daily income measurement time:*

TDI [space] [number xxx]

*Example SMS:*

**TDI[space]20**

xx are hour, for example when the beekeeper set TDI 20, SMS Scales will measure daily income from 8pm until 8pm. Daily income can be negative.

**GSM signal** - the signal strength of GSM network which should be between 7 and 31, although it is possible to establish a connection with somewhat weaker signal, but there are no guarantees that the device will always be online. If at some locations you have problems with signal strength, GSM antennas higher in quality can solve the problem.

**Sis.Temp** - device system temperature. This is not air temperature (from the outdoors). The value of this parameter, when in standby mode, varies for only about +2 C in relation to the actual air temperature. So this parameter can also be used, approximately, as the thermometer for the air temperature. If **Sis.Temp** parameter is below 7C (real 5C), it can be expected that the battery supply lasts much less than anticipated. This data must be in the range -30C to 80C, otherwise the device will turn off the GSM module in order to prevent damage.

**Battery status** - battery capacity value. It is expressed in 5 notches 20% each. Example:

1. 1/5 of - battery is 20% full and it should be in recharged or replaced as soon as possible
2. 2/5 - The battery is 40% full
3. 5/3 - The battery is 60% full
4. 4/5 - The battery is 80% full
5. 5/5 - The battery is full 100%

If the sensor for temperature and humidity is connected to the SMS Scales text messages will show these parameters in MODE1 and MODE2.

NET INFO – option that the beekeeper set some specific weight and receive SMS info when it is reached. Beekeeper just need to send SMS NET INFO XXX (XXX is specific weight in kilograms, max 3 digit). If the beekeeper wants to receive SMS when it reach 102kg he would send SMS: NET INFO 102. If he wants 58kg he will send: NET INFO 58.

#### **NET INFO about reached weight**

*Format for sending SMS messages:*

NET [space] INFO [space] [number xxx]

*Example SMS:*

**NET[space]INFO[space]102**

**Note:** NET INFO works in both SMS Scales modes.

#### *Example SMS:*

ID001 – MyApiary A1

Location: Mountain 2

Achieved NET value of 102kg!

The beekeeper can turn off info by sending SMS: **NET INFO OFF**.

BATTERY CAPACITY – battery status is shown at the end of SMS report and it is expressed in 5 notches. Except this, there is a option that send SMS warning to the beekeeper when the value is 1/5. The beekeeper has enough time to change battery or reload it.

#### *Example SMS:*

ID001 – MyApiary A1

Location: Mountain 2

Battery capacity is 1/5. Please, replace battery.

OVERLOAD PROTECTION – When the GROSS weight (beehive, extensions and honey weight) close to maximum load of load cell, the beekeeper will receive warning:

#### ***In the case of cell overload risk, the beekeeper receives SMS:***

ID001 – MyApiary A1

Location: Mountain 2

The scales will be overloaded soon. Please reduce weight of the beehive!!!

The beekeeper needs to reduce weight or load cell can be damaged permanently.

WEIGHT LOSS – option that informs the beekeeper in case of sudden weight loss, that may be signal of swarming or stealing extensions...

SMS Scales controls weight every 5 minutes and in the event that it detects a weight of >1kg less in prior measurement will send info SMS. Beekeeper can activate and deactivate this option by SMS (such is alarm command).

For activating this option:

**WEIGHT**[space]**LOSS**[space]**1**

For deactivating this option:

**WEIGHT**[space]**LOSS**[space]**0**

**ALARM**[space]**STOP** also deactivating this option.

The beekeeper gets SMS if SMS Scales detects weight loss.

***In the case of weight loss the beekeeper receives SMS:***

ID001 – MyApiary A1

Location: Mountain 2

WARNING: Weight loss detected !!!

## POSITIONAL AND WEB SERVICES

GSM POSITION – SMS Scales can using GSM technology for calculating position and send by SMS or e-mail link for Google services Google maps and Google Earth. For making this option available beekeeper needs to send SMS:

*Format for sending SMS messages:*

**POSITION**

SMS contains standard informations and latitude and longitude with link to Google Maps or Google Earth. By clicking on link on his smartphone or computer it shows location on map:

*Format for sending SMS messages:*

**[ID number] – [NAME]**

Location: **[LOCATION name]**

Lat: **[latitude]**

Lon: **[longitude]**

**[link for Google]**

**Example SMS:**

ID001 – MyApiary A1

Location: Mountain 2

Lat: 43.392325

Lon: 21.494751

maps.google.com

**Note:** Because of imperfection of GSM technology there are deviation of couple hundred meters. SMS Scales Team works on improvement of this option.

EMAIL – option for setup reports e-mail. It is necessary to have SIM card with activated Internet service, any mobile operator. Beekeeper needs to setup his own e-mail in which he will receive reports. He just need to send SMS:

*Format for sending SMS messages:*

EMAIL [space] SET [space] [e-mail in which You want to receive reports]

**Example SMS:**

**EMAIL[space]SET[space]myname@gmail.com**

E-mail that beekeeper receives contains all informations as SMS in MODE1 and MODE2, and SIM card balance status. E-mail contains these informations:

**Example e-mail:**

ID001 – MyApiary A1

Location: Mountain 2

NET: 77.82 kg (+-25g)

TARA: 5.86 kg

GSM Signal: 21 (7 to 31)

Sis.Temp: -6C (-30C to 80C)

Battery status: 5/5

Balance status:

vodafone

Balance: 54.92 \$.

For advanced users there is option to set their own e-mail server. They can do it by command:

*Format for sending SMS messages:*

EMAIL [space] SET [space] SERVER [space] [server adress] [space] [server port] [space] [user name] [space] [password]

**Example SMS:**

**EMAIL[space]SET[space]SERVER[space]mail.optical.rs[space]25[space]smsvaga[space]12345**

FTP - there is an option to SMS Scales sends data to an FTP server. Beekeeper can configure FTP server by SMS:

*Format for sending SMS messages:*

FTP [space] [adresa servera] [space] [korisnik] [space] [password] [space] [/folder]

**Primer SMS poruke:**

**FTP[space]ftp.optical.rs[space]smsvaga[space]12345[space]/reports**

/ is folder for data on FTP server. In case of a beekeeper left only "/" the data will be stored in the root folder.

FTP report can be turned off by command: **FTP OFF**.

## BALANCE CHECK

Optical SMS Scales are the first of this kind device that contains option for balance checking. It can be done by two ways:

1. USSD codes
2. SMS commands

It can be done by sending command: CREDIT SET x or CREDIT SET SMS x. x is Your mobile operator checking option.

*Setup by USSD code:*

CREDIT [space] SET [space] [operators USSD]

*Example SMS for Vodafone:*

**CREDIT**[space]**SET**[space]\***141#**

*Setup by SMS:*

CREDIT [space] SET [space] SMS [space] [operators SMS command]

*Example SMS for T-mobile Croatia:*

**CREDIT**[space]**SET**[space]**SMS**[space]**S 0110**

When You're setup balance checking, You can now check balance by sending SMS command:

**CREDIT** (text must be typed from the beginning of SMS messages in large letters)

After few seconds You receive Balance status from SMS Scales SIM card

**Note: Setup is done only the first time!**

## ALARM FUNCTION

ALARM – function that protect Your apiary, beehives, vehicle... from theft. Beekeeper needs to secure object by alarm detectors or microswitches and connect it with SMS Scales. Setup is done by SMS:

**ALARM function**

*Format for sending SMS messages:*

ALARM [space] [START or STOP]

*Example SMS:*

**ALARM**[space]**START** - alarm is activated

**ALARM**[space]**STOP** - alarm is deactivated

If there is unauthorized access to a protected territory beekeeper gets **only one** SMS warning.  
It looks like this:

*In the case that somebody compromise safety the beekeeper receives SMS:*

ID001 – MyApiary A1

Location: Mountain 2

WARNING: Compromised safety!!!

**For any additional informations contact our SMS Scales Team or visit our website  
[www.smsscales.com](http://www.smsscales.com)**

## FREQUENTLY ASKED QUESTIONS

Problem	Explanation
The measurement is incorrect	<ol style="list-style-type: none"> <li>1. Make sure the scale is properly leveled</li> <li>2. Check the value of the parameter TARA</li> </ol>
SMS Scales does not send an SMS (SMS-measurement)	<ol style="list-style-type: none"> <li>1. Make sure that your mobile phone number and contact name are added correctly to the SIM card (must be the User)</li> <li>2. Check the status of the pre-paid cards credit</li> </ol>
SMS measurements arrive later than the normal time	This problem is mainly caused by the state of the mobile network operator, but be sure to check the signal strength of GSM in the SMS message you receive (the value must be between 7 and 31 for it to work smoothly)
After pressing the key on the display, you don't get a measure	<ol style="list-style-type: none"> <li>1. Confirm that the cable is connected to the display</li> <li>2. Check the battery of SMS Scales</li> </ol>
Sometimes the SMS Scales, on the first "ring" reject the call and don't send the SMS message (SMS-measurement)	The problem may be caused by bad conditions of the mobile operator network. Wait a while and call again.
When you call SMS Scales occasionally you hear the message that "mobile subscriber is not available at the moment"	<ol style="list-style-type: none"> <li>1. The problem is caused by the condition of the network of mobile operator</li> <li>2. Check the GSM signal (must be a value between 7 and 31 for it to work smoothly)</li> </ol>
When you call SMS Scales you hear the message "mobile subscriber is not available at the moment"	<ol style="list-style-type: none"> <li>1. If the frequency of blinking of the yellow indicator light on SMS scales electronics is once per second - Area is not covered by the GSM signal</li> <li>2. There was a power outage due to a discharged battery. It is necessary to recharge the battery. (see chapter: <b>BATTERY CHARGING</b>)</li> </ol>
Is the use of pan necessary?	Not if the scales is not exposed to atmospheric precipitation, but it is highly recommended.