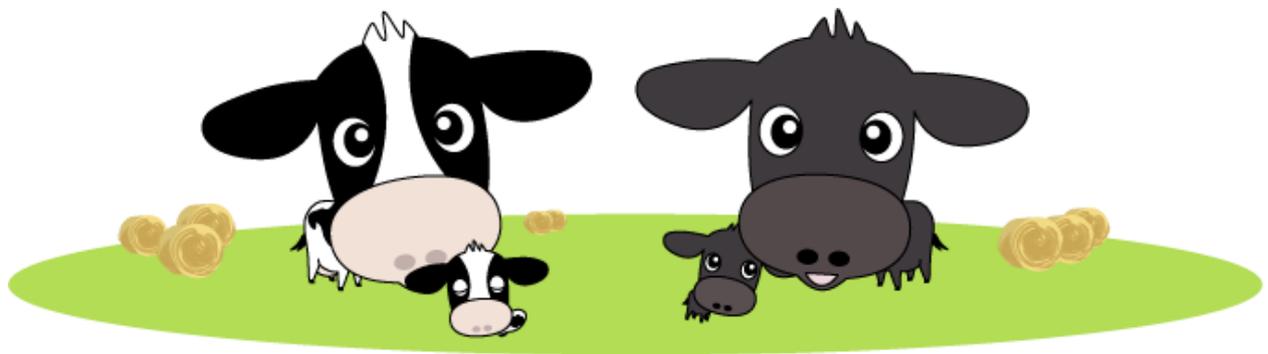




User's Guide

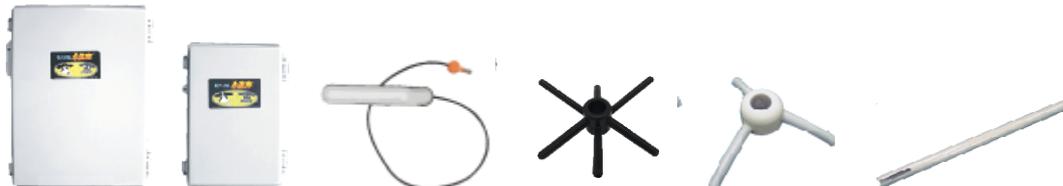


【Definition】

Below are the definitions of the terms which are used in this system.

- (1) "Sensor" means the equipment which measures the body temperature of the cow every five minutes and transmits the temperature data to the Substation
- (2)"Substation" means the equipment which transmits the information from the Sensor (body temperature data) to the Base station by WiFi.
- (3)"Base station" means the equipment which transmits the information from the Sensor (body temperature data) to the server by DOCOMO's FOMA network.
- (4)"6 Handed Stopper" means the equipment which prevents the sensor from coming out from the birth canal, mainly when in use for Monitoring Calving.
- (5) "3 Handed Stopper" means the equipment which prevents the sensor from coming out from the birth canal, mainly when in use for Monitoring Estrus.
- (6)" Insertion Bar" means the equipment which assists to insert the Sensor smoothly.
- (7)"Monitoring Calving" means to detect the timing of calving by checking the change of body temperature of the cow by inserting the Sensor in the birth canal.
- (8)"Monitoring Estrus" means to detect the timing of estrus by checking the change of body temperature of the cow by inserting the Sensor in the birth canal.
- (9)"Remote Website" means the dedicated website for the user which the data of the cow can be registered and body temperature chart of the cow can be checked by the data from the sensor inside the cow.
- (10)"User ID/ Passcode" means the required ID/ passcode to login the Remote Website.

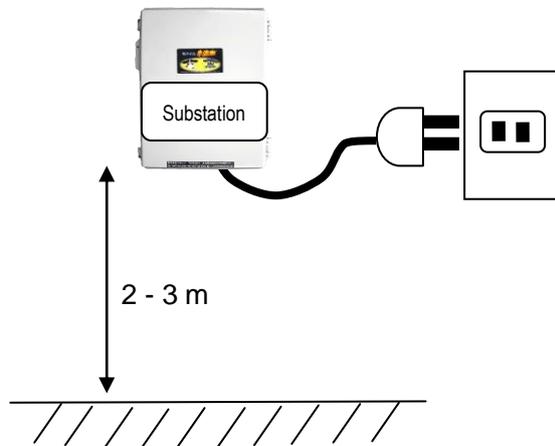
【Image of equipments】



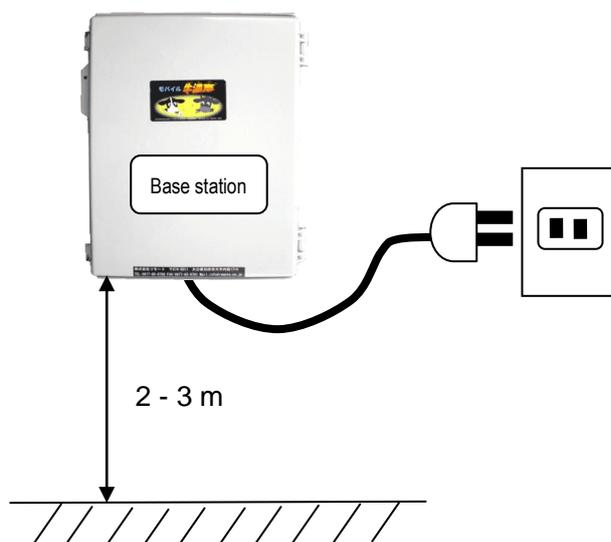
Base Station Substation Sensor 6 Handed Stopper 3 Handed Stopper Insertion Bar
(for monitoring calving) (for monitoring estrus)

Setting up Mobile Gyuonkei Devices

1. Affix substation units in each 15 m × 15 m barn area (approximate) about 2 - 3 meters above barn floor.
*** Device electronics could be damaged if there is wind in the area and the devices are hanging on pillars or beams and are banged or shocked.**
2. Connect substation units to a 100 V power outlet. Use an extension cord if there are no close power outlets.

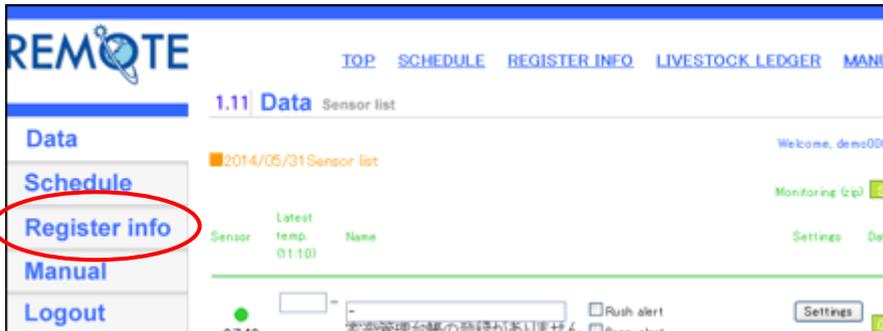


3. Reception distances are affected by barn structure. If temperature data cannot be collected, bring cows closer to the substation unit, or move the substation unit closer to the cows.
4. Affix the base station unit 2 - 3 m above the floor of the barn in a good position for a DOCOMO FOMA radio environment (if there is good line of sight and communications are possible, the base station unit can be as much as 20 m away from substation units).
*** Device electronics could be damaged if there is wind in the area and the devices are hanging on pillars or beams and are banged or shocked.**
5. Connect the base station unit to a 100 V power outlet. Use an extension cord if there are no close power outlets.

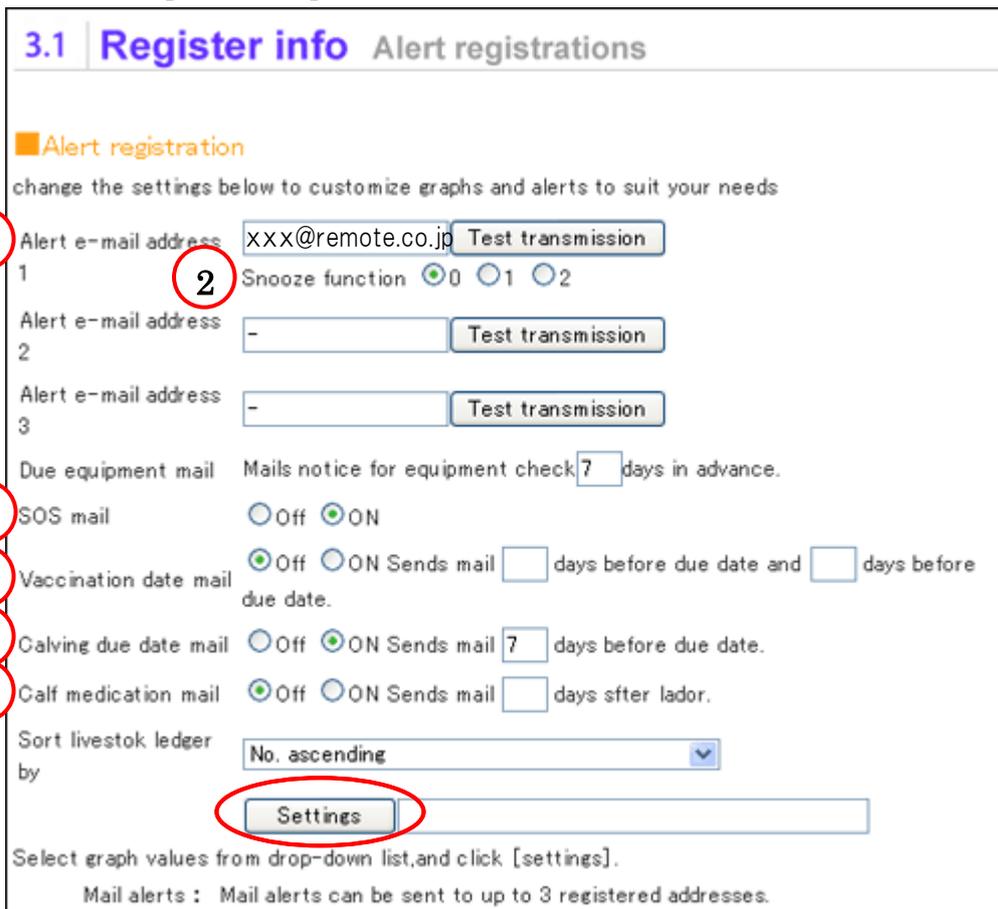


Alert Mail Settings with Smartphone or Personal Computer

1. Login to the Remote website (<http://www.remote.co.jp>).
Use your registered ID and password to login.
2. Click **[Register info]** on the menu on the left.



3. Set alerts in **[Set Alerts]**.



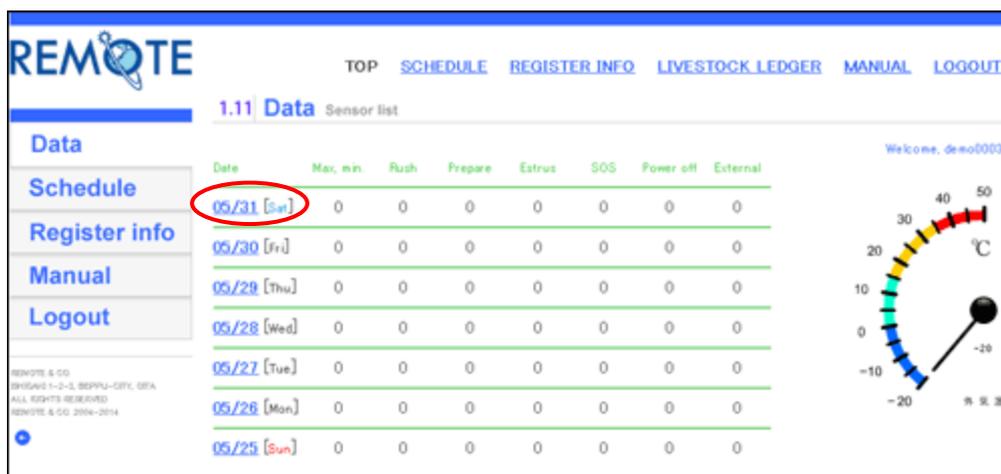
- (1) Register the email address for alerts.
 - Input up to 3 mail addresses for alerts, and then click **[Settings]**.
 - Click **[test mail]** to send a test mail to be sure that the mail addresses are correct.
 - * Once the test mail is sent, it should be received by your mobile phone immediately. If the test mail sent from Gyonkei doesn't arrive, check that the e-mail address is input correctly, and that the mobile phone mail settings allow mail from a personal computer (this setting may be switched off to prevent spam), make any necessary changes, and resend the test mail.

- (2) Snooze function
Select the number of times to resend alert e-mail 1 or 2 times at 1 minute intervals to alert e-mail address 1 (only available for Rush alerts).
- (3) SOS mail
Click **[ON]** to send a mail alert in case of temperature abnormality after Preparation Alert.
- (4) Vaccination date mail
Click **[ON]** to send a mail to remind you of due vaccinations, and specify the day for the reminder.
- (5) Calving due date mail
Click **[ON]** to send a mail to remind you of due calving dates, and specify the day for the reminder.
- (6) Calve medication date mail
Click **[ON]** to send a mail to remind you of calve medication dates, and specify the day for the reminder.

After finishing the settings, click **[Settings]** .

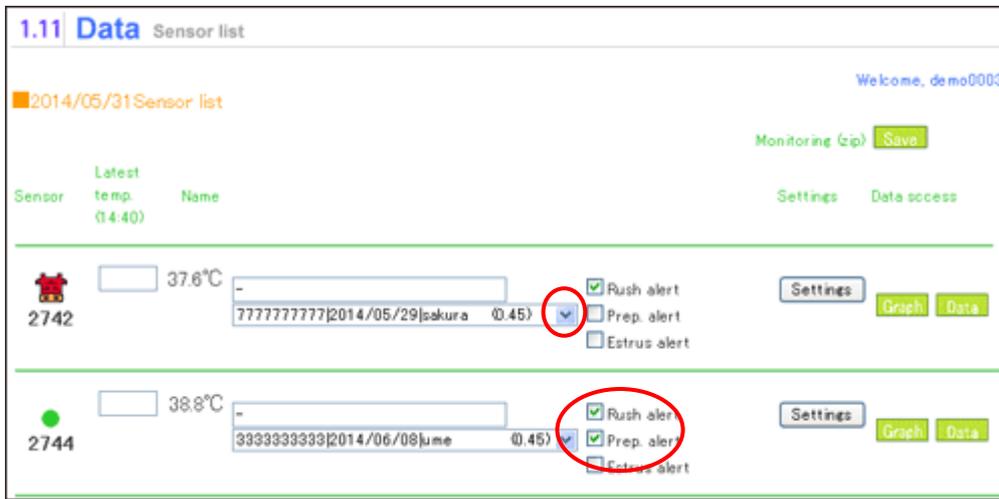
Alert Settings with Smartphone or Personal Computer

1. Input cow data. Login to the Remote website, and click today's date.

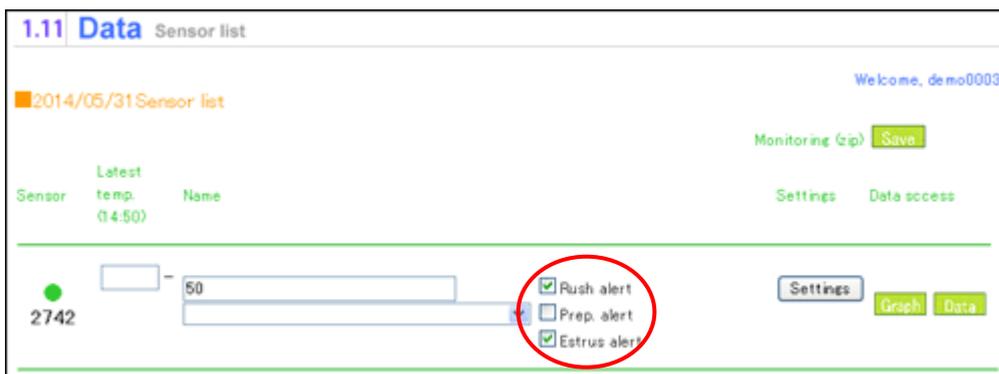


Input information into the **[Name]** column for the sensor inserted into a cow. Use the upper part as a memo for the insertion date etc, and in the lower part, select the cow number (registered in the livestock management ledger) from the pull-down list. If cow body temperature is **37 °C or more**, (you can check the latest temperature in the Sensor List), checkmark **[Rush alert]** and **[Preparation alert]**, and then click **[Settings]**.

2. プルダウンメニューから家畜管理台帳に登録した牛を選択し、センサーとの紐付けをします。
体温が 37°C以上になったら checkmark **[Rush alert]** and **[Preparation alert]**.



* Checkmark **[Rush alert]** and **[Estrus alert]** if you want to receive estrus alerts.



3. Set alerts.

Click **[Graph]**.

Be sure to set **[5 min]** for **[Alert details]**, and then click **[Save settings]**

Select an option from the pull-down list to change **[Max.]** and **[Min.]** temperature limits.



* arrives, automatically disappears from **[Preparation alert]** in the Sensor list. **[Rush alert]** remains, so there is no need to checkmark it again. After a Preparation alert, the cow's head is displayed in red.

● Perform the above settings for each sensor.

● After calving, remove the cow number from the data list, and click **[Settings]**.

* After calving, if you want to use a sensor straight away on another cow, only reconfigure alert settings at least 24 hours after removing the sensor, because data will remain for the previous cow.

* Because radio waves of sensor inserted into the birth canal can be attenuated by bodily fluids, radio reception might not be possible if the cow is too far away from the receiver, or if

the cow's head is facing the receiver. Although temperature graph data may become fragmented, alerts will be performed normally if 60% or more of the data is collected.

家畜管理台帳の登録

1. Click [New].

■Livestock ledger Page Print Batch Print **New**

Total	Pregnant	Pre-pregnant judgement	Pre-insemination cows (60 days or less not pregnant)	Pre-insemination cows (60 days or more not pregnant)	No calving history before insemination	Rearing	Fattening	Pregnancy period							
0	0	0	0	0	0	0	0	Holstein AI 280 days	Holstein ET 278 days	Black wayu AI 285 days	Black wayu ET 278 days	Crossbred AI 285 days	Crossbred ET 278 days	Jersey AI 280 days	Jersey ET 278 days

Search results page: [Next>>](#)

No	Ear tag No.	Breed	Stage	Name/number	Birth date	Last calving date	Birth history	Not Pregnant	Insemination/transplanting date	Judgment	Due date	Temp difference	Delete

Settings

- 2.耳標番号から鑑定までをわかる範囲で入力します。
入力後は、[追加]をクリックすると登録されます。

■Livestock ledger Page Print Batch Print Summary

下記フォームに家畜情報を入力後、「Addition」ボタンをクリックしてください。家畜管理台帳に登録します。

No	Ear tag No.	Breed	Stage	Name/number	Birth date	Last calving date	Birth history	Not Pregnant	Insemination/transplanting date	Judgment	Due date	Temp difference
01	999999999	Holstein, AI	Adult	hanako	2010/1/1	2013/12/1	1	-	2014/3/1	*		
02		▼Select	Adult					-		-		
04		▼Select	Adult					-		-		
05		▼Select	Adult					-		-		

Addition *最大母牛登録数100頭です。種100頭の登録が可能です。x x

■Livestock ledger Page Print Batch Print New

移動平均温度差は必須項目ですので必ず入力してください。

Total	Pregnant	Pre-pregnant judgement	Pre-insemination cows (60 days or less not pregnant)	Pre-insemination cows (60 days or more not pregnant)	No calving history before insemination	Rearing	Fattening	Pregnancy period							
2	2	0	0	0	0	0	0	Holstein AI 280 days	Holstein ET 278 days	Black wayu AI 285 days	Black wayu ET 278 days	Crossbred AI 285 days	Crossbred ET 278 days	Jersey AI 280 days	Jersey ET 278 days

Search results page: 1

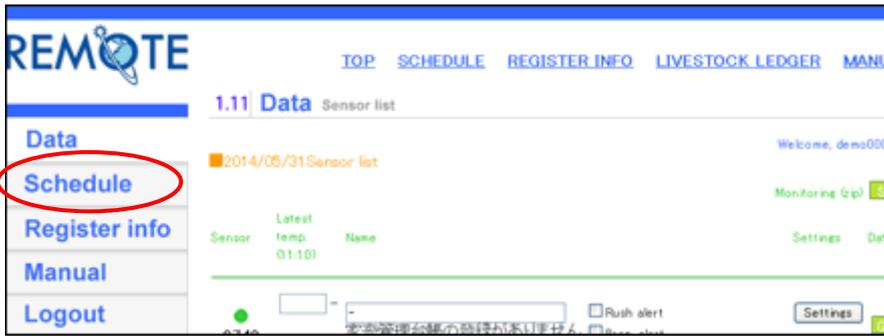
No	Ear tag No.	Breed	Stage	Name/number	Birth date	Last calving date	Birth history	Not Pregnant	Insemination/transplanting date	Judgment	Due date	Temp difference	Delete
1	999999999	Hol	Adult	hanako	2010/01/01	2013/12/01	1		2014/03/01	*	2014/12/06	0.45	<input type="checkbox"/>
2	222222222	Hol	Adult	sakura	2009/02/01	2013/10/01	4		2014/01/01	*	2014/10/01	0.45	<input type="checkbox"/>

Settings

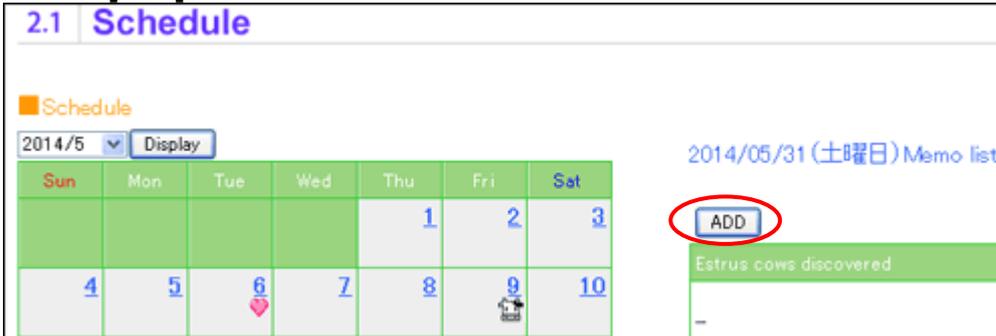
- ①耳標番号を押すと詳細が表示されます。
②項目をクリックすると、その項目を基準に並べ替え層別ができます。クリックするごとに昇順と降順を繰り返します。
③登録した牛を削除する時、チェックを入れて[削除]をクリックします。

Estrus Detection Settings (for smartphones and personal computers)

1. Select **[Schedule]**.



2. Click **[Add]**.



3. Click **[Select]** to display the Select Registered Cow screen to select cows for estrus detection.
4. Due estrus date is set for 20 days ahead, but can be changed 5 days earlier or later. Select the date from the pull-down menu, and then click **[Save]**.
5. The memo details can be used for scheduling and will be sent to the e-mail address for alerts on the specified day. Input a memo and checkmark , then select the date for mail from the pull-down menu, and then click **[Save]**.
The calendar is displayed with a clock mark.



2.1 Schedule

■ Schedule

2014/5

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 ♥	2	3
4	5	6 ♥	7 ♥	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	☆ 31 ✎

The due date is displayed in the calendar.

The pencil mark indicates the day input, while heart mark shows due estrus date.

Due calving dates are shown by cow symbols.

Details of Alerts and Notifications

With the above settings performed, alert e-mails will be sent if any of the conditions below are detected.

○ Temperature Sensor

[Preparation alert] md1109cw@remote.co.jp

Alerts you that a cow's body temperature has dropped ahead of calving.

[Rush alert 1] md1109@remote.co.jp

Alerts you that the sensor has come out after a Preparation alert has been sent, due to waters breaking or expulsion from the birth canal.

[Rush alert 2] md1109@remote.co.jp

Alerts you that the sensor has come out after a Preparation alert has been sent, due to waters breaking or expulsion from the birth canal.

[Estrus Alert] (Web version only) hatsujyou@remote.co.jp

Alerts you that estrus has begun.

[SOS mail] md1109@remote.co.jp

If you have enabled SOS mails, and SOS will be sent after a Preparation alert if body temperature exceeds 39.3 °C (black wagyu) or 39.5 °C (dairy cow).

[Max. temperature alert] md1109@remote.co.jp

Alerts you that fever has occurred before a Preparation alert or if the SOS function is off.

Notification mail (Notification at 7 AM)

[Due calving date alert] (web version only) tuho01@remote.co.jp

Notifies you that there are 7 days left until the due calving date.

[Estrus confirmation mail] (web version only) tuho01@remote.co.jp

Notifies you of the due estrus date in the calendar.

[Vaccination date mail] (web version only) tuho01@remote.co.jp

Reminds you to vaccinate cows before they calve.

○ Outside temperature sensor

[Max. & Min. temperature alert]

Alerts you that the temperature went beyond the maximum or minimum limit.

* At the top of the temperature graph, if the **[Alert details]** are not set from 5 minutes to 12 hours, this alert will not be delivered.

○ Others

[Outage] number of outage will be displayed on administrator screen (no alert)

Number of outage is counted because of the possibility of equipment failure when the power supply becomes lower than 98 volt. When outage occurs frequently, please shut down the equipment until the cause is identified.

*No alerts will be sent if they are not set. Please check the settings.

*Because temperatures measured every 5 min with this system are processed in the monitoring center, it may take between 9 and 14 minutes for notification to arrive. Therefore, even if you actually see a temperature sensor come out, notification is not immediate.

Please understand that the system does not provide a shortcut.

*Communications may be cut due to power failures, equipment malfunctions or Internet abnormalities.

Because e-mail alerts cannot be received if communications have been cut, please use your mobile phone or other device to check temperature data at least 4 times a day. If communications have been cut, and you find power supplies to be functioning normally, and temperature data is not displayed after 10 min after restarting the base station and substation devices, please contact us.

Inserting Sensors into Cows Due to Calf

Prepare:



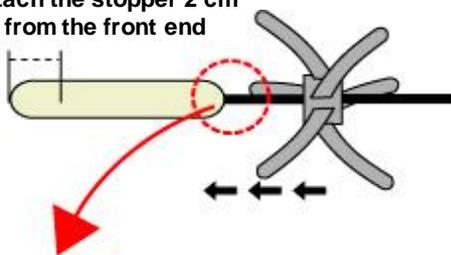
Inserting sensor into cow

* Make a note of the sensor number and cow number for reference.

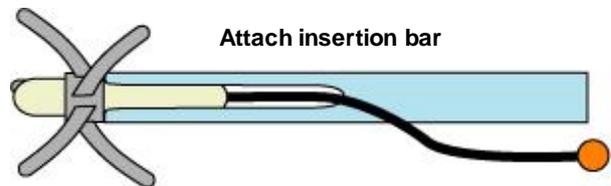
Insertion method

- (1) Use a device such as a stanchion to immobilize the cow.
- (2) Wash the external parts of the cow's genitals.
- (3) Sterilize the temperature sensor, stopper, gauntlets and insertion bar.
- (4) Attach the stopper to the temperature sensor.
- (5) Apply birth canal lubricant to the stopper and just inside the cow's genitalia.

Attach the stopper 2 cm from the front end

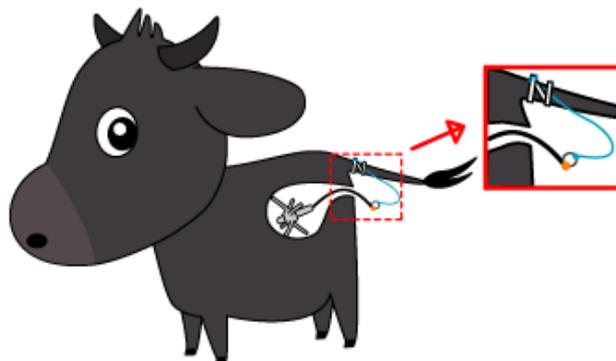


Attach insertion bar



Caution: The antenna is inside the tube. Do not push on the antenna.

- (6) Insert the temperature sensor into the pocket at the back of the birth canal.
(7 days before the cow is due to calf)
- (7) Gently pull on the antenna protection tube to check resistance. If there is not much resistance, the sensor is not inserted far enough. In this case, remove the sensor and reinsert it.
- (8) To prevent the device falling out, tape the antenna protection tube to the base of the tail.

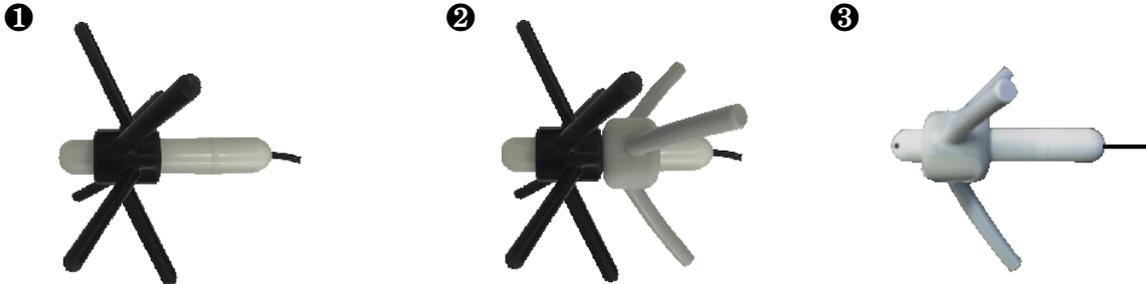


* Be sure there is enough protection tube protruding for taping.

* We recommend non-shrink, non-expanding tape to secure the protection tube.

Attaching the stopper

- ❶ This stopper offers good probability that the device will be ejected with primary membrane rupture, and will not come out beforehand.
- ❷ This stopper is used if the device comes out before waters break.
*In some cases, the temperature sensor will not stay in the birth canal.
If using the device with a prolapsed cow, we recommend using it with a prolapse belt.
- ❸ Use this 3-pronged stopper to detect estrus.



Precautions

- Do not use this equipment with anything other than cows.
- Refrain from using force to prevent birth canal injuries.
- Perform the work with at least 2 people to prevent accidents when inserting the equipment.
- Do not dismantle or modify the equipment.
- The inside of the retaining tube contains the antenna. To prevent breakage, do not excessively bend or pull the tube (max. 10 kg load).
- Do not leave the device in the birth canal more than 15 days.
- Monitor the cow for physiological changes while the device is inserted. If an abnormality is detected, remove the device and follow the instructions of a veterinarian.
- This device uses low-power radio to send data. In some environments, measured temperature data might be incomplete.
- Remove the stopper from the sensor after use, and wash all equipment in hot water (Max 60 °C, 10 minutes), and sterilize with medium strength disinfectant.
- Use neutral detergent such as dishwashing liquid to remove any dirt. Do not use solvents such as benzene or thinners.
- Do not use ultrasonic cleaning
- Do not store the equipment in direct sunlight, in places subject of vibrations or shock, or in areas where there are chemical substances or corrosive gases.
- This equipment is designed as an aid for monitoring calving, but does not guarantee trouble-free calving. The user must accept all responsibility when using the equipment.

(These procedures may change due to system modifications and so forth)