



PREG-TONE® SERIES 6 INSTRUCTIONS

Your new PREG-TONE is set up for swine and must be changed if it is to be used on other animals. See Animal Selection Chart. The PREG-TONE emits high frequency sound waves called ultrasound from the transducer ("probe"). The ultrasound waves travel into the body and reflect (echo) back from tissue and fluid surfaces to the probe. The reflected sound waves are processed by the instrument to determine if there is amniotic fluid ("fluid") in the uterus. The presence of fluid in the uterus indicates pregnancy. If fluid is detected, a continuous tone is produced. *For purposes of illustration, the following instructions are based on swine. Additional instruction pages may be included for certain other animals. All instructional material is posted on our Internet site, <http://www.rencocorp.com>.*

Testing may begin between 15 and 30 days after breeding. The PREG-TONE has been clinically proven to be 100% accurate 30 days after breeding. At 65 to 70 days after breeding the litter displaces the fluid and the testing accuracy decreases. Accurate testing is the result of placing the probe on the proper spot on the sow, at the right time, making good skin contact, aiming the probe in the proper direction, and maintaining the instrument in proper working condition.

A. BEFORE TESTING

Connect the cable to the PREG-TONE and probe, **twisting the barrels on each connector to lock**. Turn the instrument on. The red light should be lit. If not, recharge battery (about 16 hours). See Section D if the light does not stay on after a complete charge.

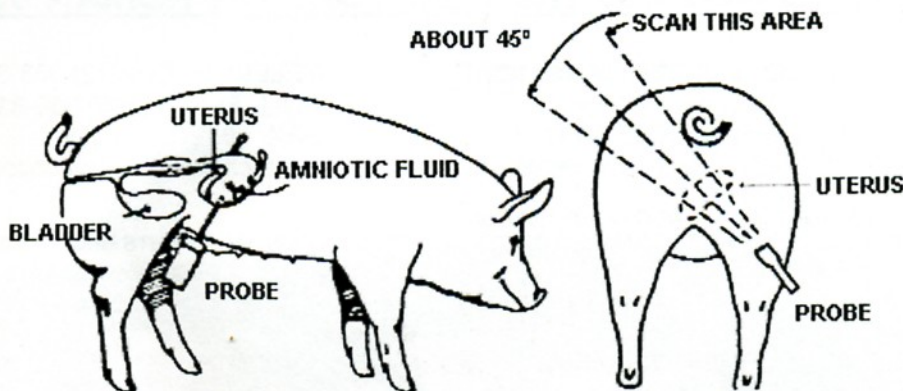
B. TESTING PROCEDURE

You **must** use a contact fluid, such as lightweight oil, (mineral oil, cooking oil etc.), in order to make good contact between skin and probe.

It is best to quiet and isolate the sow during the test. Confinement is not required, but the sow should stand while you approach and place the probe on her. You may need 15 to 20 seconds to complete a test at first, but with practice you can get good test results in as little as 5 seconds.

Turn the instrument on and put contact oil on the sow (or probe). Place the transducer on the **RIGHT SIDE** of the sow, 2 inches (5cm) in front of the rear leg and 1 inch (2.5cm) above the nipple line (See diagram). Work the probe into the oil and aim it approximately 45° forward and 45° to the side.

The procedure is to scan across the uterus to detect any fluid that may be there. You will first hear an intermittent beeping when you make good skin contact. This means that ultrasound is entering the sows body and returning properly. The PREG-TONE will return a continuous tone (the pregnant signal) if it detects fluid. The contact tone (intermittent beeping) means that the sow is open. If the sow tests open on the right side, repeat the test on her left side. Remember to put more contact oil on the sow or probe for each test. **Ultrasound will not pass through air. Use of sufficient contact oil to displace air bubbles is extremely important!**



C. TESTING PROBLEMS

1. **NO LIGHT:** If red light does not stay on when instrument is turned on, battery power is too low. Connect the **RENCO** charger and charge for at least 16 hours. Make sure that the charger connector is snapped into place and the power switch is **OFF**. If that doesn't help, try another wall socket. If it still only operates for a short period of time between charges, do as follows: Disconnect charger from instrument. Leave the power switch ON for 12 hours. Turn power switch OFF and charge for at least 24 hours. Repeat cycle up to 3 times. If the problem still exists, the batteries will probably have to be replaced and you should notify your dealer or the factory.

2. **NO "CONTACT" TONE:** You must be able to get the intermittent tone indicating good skin contact. The transducer must have a good contact with the skin for ultrasound to penetrate the skin. All of the air between the transducer and the skin must be excluded. First try using more contact oil. It may also be necessary to remove manure, dirt, and excess hair. If this fails to produce the intermittent beep, place some water in the palm of your hand and place the probe on it. If all of these things fail, contact your dealer or the factory.

3. **"CONTACT" BUT NO "PREGNANT" TONE ON PREGNANT ANIMALS:** Aim the transducer in the direction of the bladder. Assuming it is not empty, it will simulate a pregnant uterus, and produce the continuous tone. If still no tone, then with the **PREG-TONE** turned on, put 6 inches of water in a glass and put the transducer head on the surface of the water. You should hear a continuous tone, (the pregnant tone) if not, contact the factory.

4. **CONTACT TONE ALWAYS FOLLOWED BY A PREGNANT TONE EVEN ON OPENS:** Make sure you are NOT aiming the probe toward of the bladder. If the bladder contains any urine, it will always give the pregnant tone, seemingly indicating pregnancy. If this fails to get the proper results, check the cable connections to probe and instrument. A damaged cable or cable connector could cause the pregnant tone. If the cable looks damaged, replace with a new cable; else contact your dealer or the factory.

5. **NO SOUND AT ALL:** Check all of the cable connections, recharge batteries, and follow the above tests. If that doesn't help, contact your dealer or factory.

D. BATTERY

The instrument is powered by a Nickel Metal Hydride (NMH) rechargeable, environmentally friendly battery, that does not need to be recycled. It is not a standard NMH battery and must only be charged with the **RENCO** charger. *Use of other chargers voids the instrument warranty and could damage both battery and instrument.*

Charging The Battery

CAUTION: OBSERVE THE CHARGER RATINGS. MAKE SURE THAT CHARGER IS PROPERLY RATED FOR YOUR LOCALITY. DO NOT USE ON DIRECT CURRENT, (DC) LINES. DO NOT USE THE PREG-TONE WITH THE CHARGER CONNECTED TO IT.

(A) Make sure **POWER** switch is **OFF**. (B) Plug charger into wall outlet. (C) Plug charger cable into the proper receptacle on rear panel of the instrument, and push it all the way until it stops. A full charge is obtained in 16-20 hours. The unit will operate for 8-10 hours on a full charge. Using the **RENCO** charger on other batteries or devices such as "Hotshots", can damage it and voids warranty.

CAUTION: DO NOT USE THE PREG-TONE ON HUMAN BEINGS

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PREG-TONE®: ADDITIONAL INSTRUCTIONS FOR TESTING SHEEP

NOTE: Your new PREG-TONE Series 6 is set up for swine and must be changed if it is to be used on sheep. See Animal Selection Chart.

The following is in addition to the information provided in the main instruction guide. (These instructions repeat and expand on those given under Sheep Testing in the main instruction guide.)

TESTING PROCEDURE

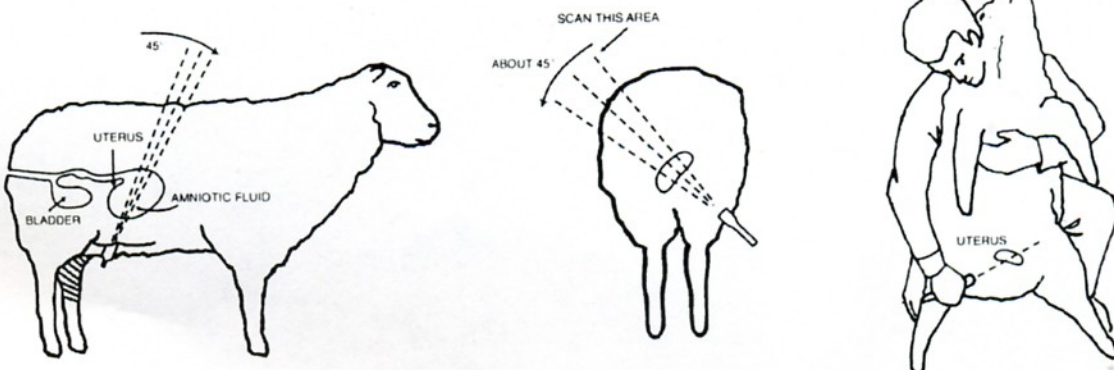
As with Swine, you must use a contact fluid (preferably without additives to avoid allergic reactions), in order to make good contact between skin and transducer. It may also be necessary to clip hair and clean the area. The procedures will be more efficient if no water is given for 8 hours prior to testing and if urination takes place shortly before the test. (Some researchers have also suggested food deprivation.)

An intermittent tone indicates good skin contact, and a continuous tone indicates pregnancy. While you will normally get the good contact tone before you get the pregnancy tone, it is possible to get just the latter.

For ewes bred in the area of 55 days, follow the same procedure as with swine. The test site is on the right side, on the clear patch of skin just to the outside of the right teat. Note that dirt and hair can adversely affect results and it is best to remove it. Accurate testing is the result of placing the transducer on the proper spot on the ewe, at the right time, making good skin contact, and aiming the transducer in the proper direction, so as to avoid the bladder and ruminant elements. Apply the contact oil to the test site. Work the probe into the oil to displace all air bubbles. Aim it across the abdomen toward the last rib at about a 45° angle as shown in the pictorial below. Studies indicate 98% accuracy.

Ewes bred 25-40 days can be tested with the ewe in the sitting position as shown below. Test site is the rear-most right teat, up to 7.5cm (3 inches) toward the outside. Remove the wool. Aim the probe **straight in, not** at a 45° across the body. If test is negative, try the left side. Accuracy is high but formal data is not available.

Liberal use of contact oil is extremely important! Ultrasound will not pass through air or air bubbles.



PREG-TONE®: ADDITIONAL INSTRUCTIONS FOR TESTING GOATS

NOTE: Your new PREG-TONE Series 6 is set up for swine and must be changed if it is to be used on goats. See Animal Selection Chart.

The following is in addition to the information provided in the main instruction guide. The PREG-TONE operates with all goats in much the same manner as with swine and sheep.

Testing may begin 30-40 days after breeding, later times yielding greater accuracies. On the other hand, very late in the gestation cycle probably beginning around 100-days, the increase in size of the litter will have displaced the fluid in the uterus, thus limiting the usefulness of ultrasonic pregnancy testing. Accurate testing is the result of placing the transducer on the proper spot on the goat at the right time, making good skin contact, and aiming the transducer in the proper direction, so as to avoid the bladder and ruminant elements.

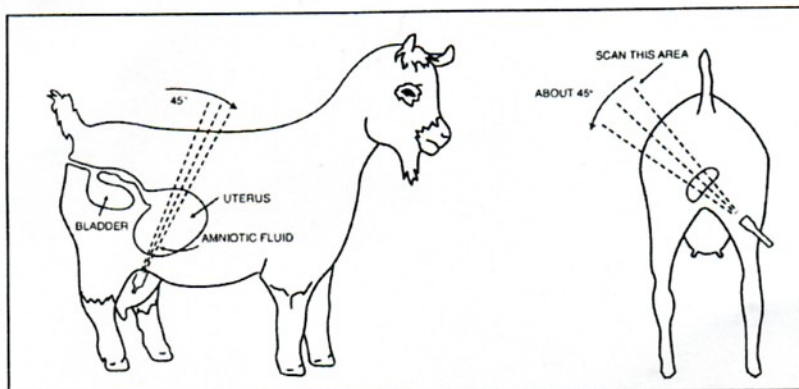
TESTING PROCEDURE

You must use a contact fluid, such as heavy 40W weight oil (preferably without additives to avoid allergic reactions), in order to make good contact between skin and transducer. It may also be necessary to clip hair and clean the area.

It is best to quiet and isolate the goat during the test, but confinement is not required. Testing is done with the goat in a standing position on a flat surface. (A 30-inch (12cm) high platform and head-gate make the work easier and less fatiguing.) Having the doe urinate prior to testing will mitigate the possibility of false positives due to bladder detection.

Turn the PREG-TONE on and put contact fluid such as 40W oil on the goat at the testing site. Place the transducer on the **RIGHT SIDE of the goat, 2 inches (5cm) in front of the rear leg and 1 inch (2.5cm) above the teat.** (See pictorial below.) Work the probe into the oil and skin. The skin must be wetted and all air bubbles between probe and skin eliminated. When good skin contact is obtained, you will hear the **Contact** tone, an intermittent beeping sound, which means that ultrasound is entering the body and returning properly. Aim the transducer approximately 45° upwards and 45° forwards, (i.e. towards last rib on left side) and scan across the uterus as shown below. If the ultrasound finds a fluid-filled uterus, the **Contact** tone will change to a **Continuous** tone, which indicates pregnancy. It is possible to be very lucky and get the Continuous tone immediately with no contact tone preceding it. Note: Avoid scanning the ruminant elements. Scanning those will produce false positives, as will the bladder.

If the Contact tone does not change to a Continuous tone, it means that the goat is open (not pregnant). **Remove hair and clean area on all that test open and test again.** If the testing on the right side indicates open, then go to the left side, **clip the hair** and repeat the test in the same relative position there. Remember to apply more contact oil for each test. **Liberal use of contact oil is extremely important!** Ultrasound will not pass through air or air bubbles.





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ADDITIONAL INFORMATION FOR USING PREG-TONE WITH LLAMA & ALPACA

(Revised 7/17/2008)

NOTE: Your new PREG-TONE Series 6 is set up for swine & llamas and must be changed if it is to be used on alpacas. See Animal Selection Chart.

Recent science has shown that the Preg-Tone can produce 99%+ accuracy in the alpaca and llama.

One testing protocol that has proven successful works as follows:

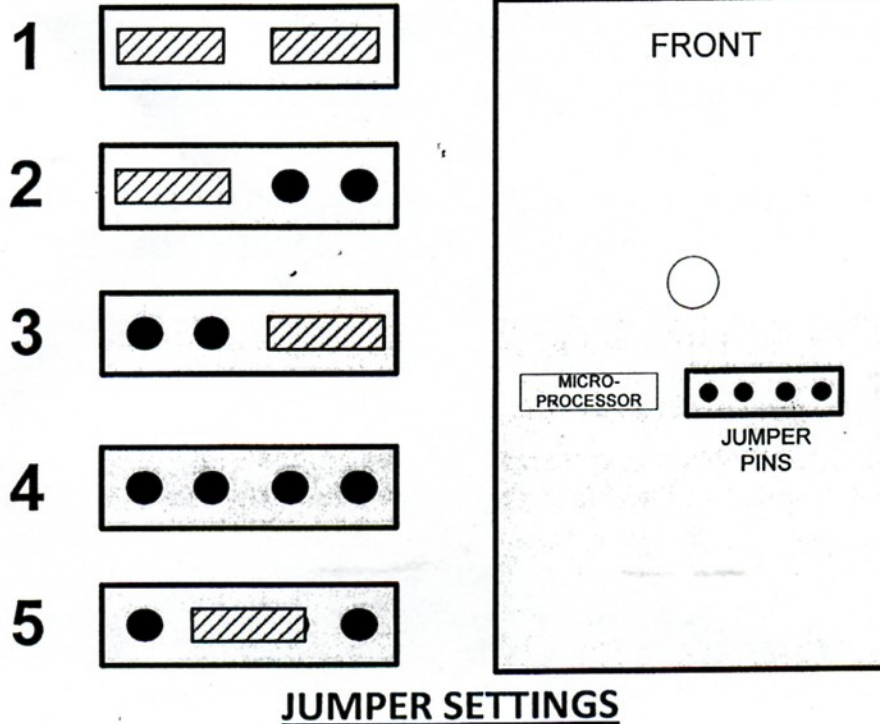
Though success may not be high, begin testing with the Preg-Tone at 28 days gestation. From 35-40 days gestation and onward, you should achieve very high success. Use the Preg-Tone to make sure that the female has not resorbed or aborted the fetus up to the last trimester.

Testing should begin on the LEFT side, since some 90% of all pregnancies in camelids take place in the left uterine horn. If testing on the left side is unsuccessful, then repeat the procedure on right side. From the literature: "*Transabdominal ultrasound is best performed on the left from day 35 to day 90. After day 90 a right or ventral approach is more likely to be successful because of how the uterus moves relative to the other organs.*"

Wet the test area thoroughly with coupling fluid (cooking oil). It is often necessary to also remove fiber. With the female standing, place the probe about 6 to 8 inches (15-20cm) down from the udder. On maiden females, you may need to place the probe a little higher, about 5 inches (12cm) from the udder. Be sure to squeeze out all air bubbles (ultrasound will not pass through air). You will normally get the contact tone first, which signifies that you have good skin contact. However, if the animal is pregnant and you begin by pointing the probe just right, you will get the pregnant tone without first getting the contact tone. Often, the positive tone is immediate when the probe is pointed straight into the belly from the angle that is defined by the female's belly. Sometimes, directing it up to a more vertical line. (It would be difficult to pick up the female's bladder from this position without really pushing into the belly and directing the probe toward the rear.)

One last thing to be aware of, you can get false positive signals from a full bladder or from ruminant elements. This is why knowing the location of the uterus and other internal organs is important. Make sure you aim at the uterus, and it should work fine.

PREG-TONE® SERIES 6 ANIMAL SELECTION CHART



Directions:

Hold instrument with belt clip side down. Remove screw and cover. Install or remove jumpers so that for a desired animal, the figure indicated for the animal, matches diagram number above. Unused jumpers may be installed on any unused single pin. These are suggested settings. Animals vary and you may find that another setting works better for your animals.

<u>Animal</u>	<u>Figure</u>
PIG	1
LLAMA	1
SHEEP	2
MEAT/DAIRY GOATS	2
ALPACA	2
LARGE RABBIT/FOX	3
PYGMY GOAT	4
COW (>90-DAYS)	1
MARE (>90-DAYS)	1
MINIATURE MARE	1
DONKEY	1

<u>Animal</u>	<u>Figure</u>
MINIATURE DONKEYS	4
CUSTOM OR SPECIAL	5

Technical Note:

Windows open at following times: 1=180us, 2=130us, 3=85us, 4=115us