

## Cattle Ear Tag Beacon Frequently Asked Questions:

- 1) What does a Cattle Ear Tag Beacon do for me?

With many range cattle operations, cattle are hard to locate when they need to be moved. A Cattle Ear Tag Beacon and a receiver will allow you to locate the animal much more quickly than with a visual search.

- 2) How does the beacon work?

The beacon has a transmitter that sends a signal continuously while turned "on". Each beacon has a unique transmitting frequency that allows it to be picked up by a remote receiver. A handheld, vehicle or aircraft mounted receiver with antenna can be used to find the beacon. The receiver is set to the frequency of the transmitting beacon and shows a visual indication like the bars on a cell phone, and also has an audible beep when the beacon pulse is being received. Using direction finding techniques, the antenna can be moved to find the direction where the signal is the strongest, indicating the direction of the animal.



- 3) How does it attach to the animal

The Cattle Ear Tag Beacon is encased in a commercially available ear tag which is attached to the ear.

- 4) How far is the range of the beacon?

Range is dependent on many factors including the weather, receiver used, antenna used and any interference. The beacon is a line-of-sight device, meaning that the best signal is received when there is a direct line-of-sight from the receiver to the beacon. From the top of a hill several miles or more should be possible, depending on local conditions.

- 5) How large is the receiver?

There are different types of receivers, but one of the more common is a handheld iCom R20. Different antennas, such as the yagi antenna shown below, can be attached to enable longer range and better direction finding capabilities.



- 6) How is the beacon found using the receiver?

The user goes to the spot where they think the animal may be (water, salt block, feeding area) and points the antenna in various directions until the





signal is received. If no signal is received, the user surveys the terrain and goes either to the highest spot, or to a lower spot to increase the signal range, continuing to search for the signal until transmission is received. Headphones can be used to remove all ambient noise and to increase the probability of success. Four-wheelers and vehicles can be used to increase the search area as well.

7) What happens if I don't pick up the Beacon signal while on the ground?

We have relationships with various aircraft companies who are authorized to fly with the receiver antennas mounted on the aircraft. These airplanes can fly over the area and have a much better line-of-sight range to pinpoint the area where the animal beacon can be found. Flight time can be purchased for around \$200/hour.

8) How will I know I am getting close?

The receiver will have a louder audible signal and the visual signal strength will be higher. If you are moving away from the animal the exact opposite will occur, the audible signal will get softer and the visual signal will get weaker (like a cell phone).

9) What is the battery life of the beacon?

The beacon is designed to operate for approximately 6 months of continuous use.

10) What do I do when the battery dies?

The beacon has a user replaceable battery. Once the battery dies, a replacement can be purchased and replaced. Battery replacement is typically a return to vendor refurbishment.