



Advanced Topics



Topics Covered

- Utility Lines
- Back Signal
- Bounce Signal
- Setting Gain
- Factors that Affect Range
- Pinpointing
- Distance Estimation
- Determining Collar Frequency
- Programming Frequencies into a Maxima
- Removing Frequencies from a Maxima
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Utility Lines



Power lines re-radiate signal making you believe that the dog is always toward the power lines.

- “Listen” in a 180 degree arc with back to power lines
- Maintain gain setting and cross power lines and repeat with back to power lines
- Collar is located at bearing with strongest signal

Back Signal

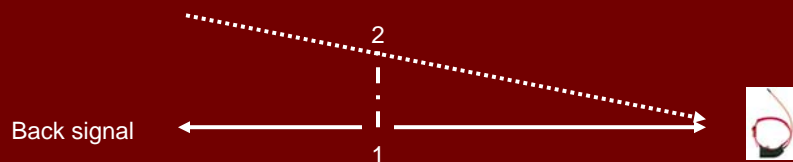


- Back Signal refers to picking up a signal in two directly opposite directions (in front of and directly behind you) and is the result of the signal transmitting directly through your location in a continuous line.
 - Determining accurate location of a transmitter
 - Turning gain down eliminates most back signals
(See slides 27 through 30 for diagram)
 - Triangulation
 - Select 3 to 5 “listening” points that are widely dispersed.
 - Travel to each listening point and adjust gain so that a strong signal can only be detected in a narrow arc (30 to 60 degrees).
 - Note the bearing of the “break” in signal, where the signal drops off, on each side and choose the mid-point of the arc as the most likely bearing to the transmitter.
 - Repeat this procedure at 2 to 4 additional locations.
 - The location of the transmitter will be at the common bearing of the different listening points.

Back Signal



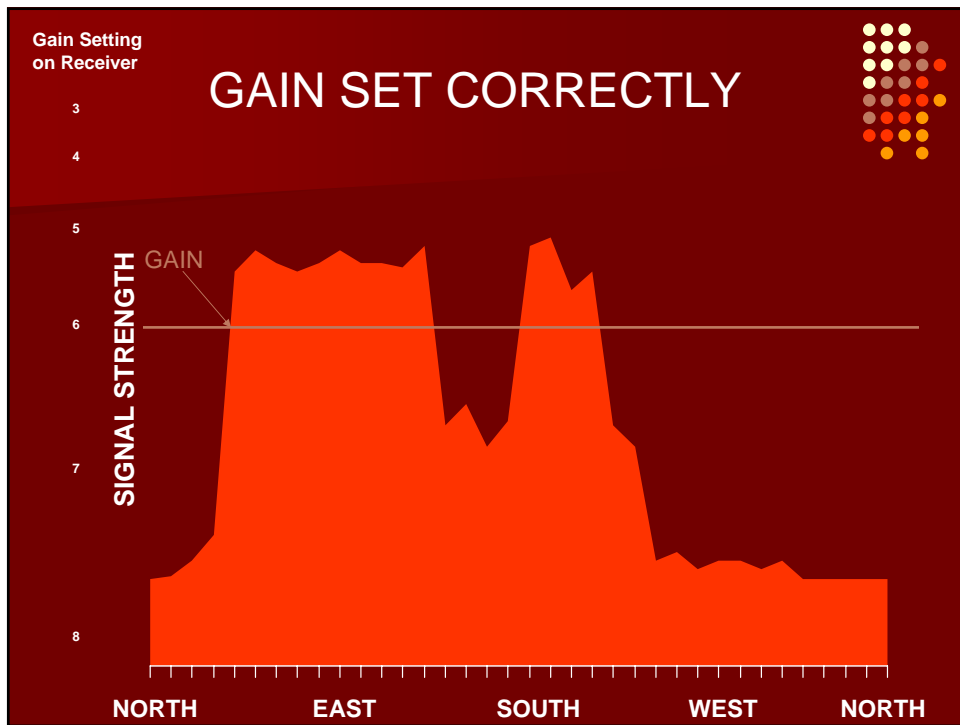
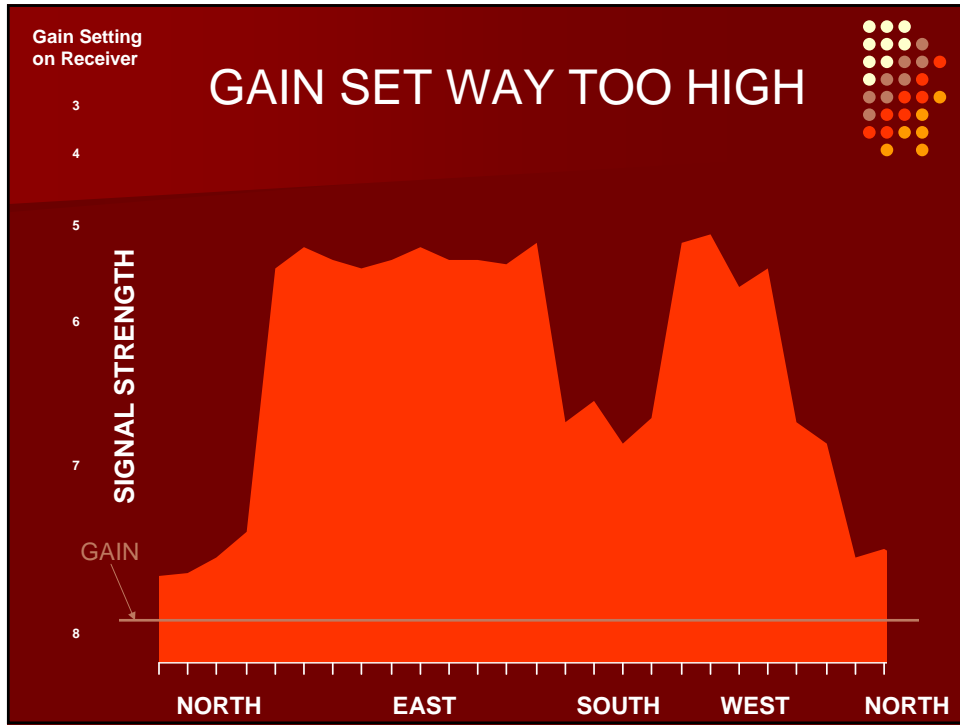
- Move perpendicular (from point 1 to point 2) to signal axis. Remember bearings and see if one changes from the second listening point.



Bounce Signals



- If you get signal bounce (two or three locations with similar signal strength) and gain is set correctly – collar cannot be line of sight
 - Change listening location (ridge top or high point preferred)
 - Process of Elimination – Determine where collar is not. Collar cannot be anywhere you can see because that would be the strongest signal– focus search on locations you cannot see (over hill or ridge, etc.)



Factors that Affect Range



- Strength of Transmitter – The more powerful the collar, the greater the distance. There is a significant difference in collar strengths among different manufacturers with Tracker making many of the most powerful collars
- Sensitivity of Receiver – Tracker receivers have excellent sensitivity as do some other brands. Scanner type receivers often have less sensitivity as compared to more narrow band receivers.
- Frequency Fine-tuning of Receiver – It is important that the receiver is tuned to the collar. Temperature can affect the transmitter frequency - make sure you are on frequency
- Antenna Gain – In general, the larger the antenna the greater the range (other things being equal)
- Antenna Orientation – Match the antenna orientation on the collar to that connected to the receiver

Pinpointing (Beam Width)



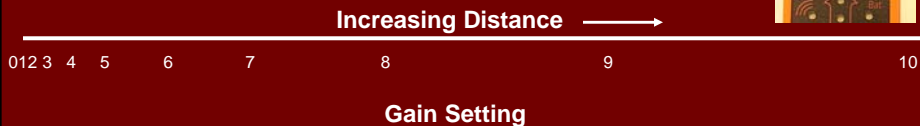
Beam width is the arc of the strongest signal strength. Generally it is the "true" direction +/- 10 to 20 degrees on either side of true

- Gain Setting – the lower the gain is set, the narrower the perceived beam width
- Number of elements in antenna – Antenna elements will help focus the signal and reduce the width of the beam
- Antenna orientation – match receiver antenna to orientation of the antenna on dog collar

Distance Estimation



- When tracking at line of sight – look at gain setting
- Because range will vary with alternate environments it is best to learn distances in similar environments to your hunting conditions.
- Each receiver is "tuned" a bit differently so gain experience with each receiver will vary
- Gain is logarithmic – each successive number **DOUBLES** the sensitivity



Determining Collar Frequency



Each collar/transmitter has a designated frequency. The first 3 numbers (to the left of the decimal point) refers to the frequency band. The last three digits (to the right of the decimal point) refer to the specific frequency band. For example:

217.125

Band

Specified Frequency

Programming a Maxima - 1



- Press and hold the **On/Off** button on your receiver until it turns on.
- Manual is the suggested mode for programming. If the unit is in "AUTO", press **ENTER** to switch to "MAN" (see Figure 1).
- Press the **MODE** button, the screen will display a "CH" followed by 4 numbers, the first number will be blinking (see Figure 2).
- **For Maxima Duo or 1000** press **ENTER**. Now the second number will be blinking.
- **For Maxima 2000 or 5000** press the **Λ** button to change between frequency bands. Note that as you change the first blinking digit at the top of the screen, the frequency band displayed at the bottom of the screen will also change. Once the correct band is displayed, press **ENTER**. Now the second digit will be blinking.

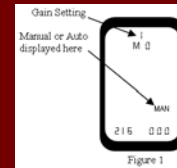


Figure 1

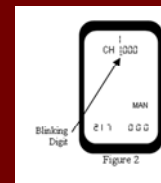


Figure 2

Programming a Maxima - 2



- **For Maxima Duo or 1000** press **ENTER**. Now the second number will be blinking.
- **For Maxima 2000 or 5000** press the **Λ** button to change between frequency bands. Note that as you change the first blinking digit at the top of the screen, the frequency band displayed at the bottom of the screen will also change. Once the correct band is displayed, press **ENTER**. Now the second digit will be blinking.
- Use the **Λ** or **V** button to enter the fourth digit of your collar's frequency (the first number after the decimal point). Press **ENTER** to save. The third digit will now be blinking.
- Press the **Λ** or **V** button to enter the fifth digit of your collar's frequency (the second number after the decimal point). Press **ENTER** to save. The fourth and final digit will now be blinking.

Programming a Maxima - 3



- Press the **Λ** or **V** button to enter the last digit of your collar's frequency. Check to make sure that the frequency displayed at the bottom of the screen matches the frequency of your collar. If any changes need to be made, **ENTER** will always move the blinking digit to the right and **MODE** will move the blinking digit to the left. Once the correct frequency is displayed at the bottom of the screen, press **ENTER** to save.
- The screen will now display an "M" followed by a single blinking digit. In this screen, you will assign a memory slot, "M", to the collar frequency (see Figure 3).
- The first memory slot will be "0". Press the **Λ** or **V** button until the desired memory slot is displayed. Press **ENTER** to save. The screen will return to the original view (see Figure 1).
- Now your first collar is programmed, repeat this process for each collar.
- Once all collars are programmed into the receiver, push the **Λ** or **V** button to switch between memory slots and their assigned collars.

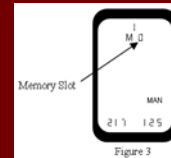


Figure 3

Removing a Collar Frequency



- Select the collar you want remove by pressing the **Λ** or **V** button until the desired frequency is at the bottom of the screen. Press the **MODE** button, the screen will display a "CH" followed by 4 numbers. The frequency to be deleted should be displayed at the bottom of the screen. Press the **V** button until four flashing dashes are displayed after the "CH." Press **ENTER** twice. (See Figure 4)

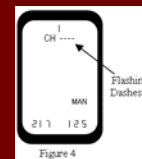


Figure 4

Frequently Asked Questions



Q: Which system should I purchase?

A: If you are running no more than one or two dogs and don't need to track other dogs within your hunting party then the Classic is the receiver you should purchase. The Maxima is designed for hunter needing to track multiple dogs and multiple frequencies.

Q: What is the difference between the Classic and the Maxima?

A: The Classic is a crystalled receiver and is only capable of picking up two specific frequencies. The Maxima is programmable and capable of picking up multiple frequencies and multiple frequency bands.

Q: Does the Classic have more range than the Maxima?

A: No. The sensitivity of both receivers is about the same. The Classic is a bit easier to use (simpler) but it is not as flexible as the Maxima.

Frequently Asked Questions



Q: Can I use the Maxima with collars I already own?

A: Yes, as long as the Maxima is capable of picking up the frequency band with collar frequency is in. For example if your collar is in 216.109 then your Maxima needs to be able to pick the 216 frequency band.

Q: Do I need an external antenna?

A: It depends. If you are hunting in an area that is not very accessible and you want to track while driving a vehicle then using an external antenna may help. For hand-held antennas, you will get slightly more range and a more narrow beam width with a Yagi antenna.

Frequently Asked Questions



Q: Can the Classic be purchased with the SMA Connector?

A: Not at this time

Q: Where do I send my units for service?

A: Tracker services all products at the Idaho facility.

Q: What is the normal turn-around time for repairs at Tracker.

A: We try to turn around our repairs within 2 weeks (10 business days) but it is subject to first in – first out scheduling and backlogs will vary.

Frequently Asked Questions



Q: Which is the most powerful Tracker collar?

A: From independent tests, Tracker collars are among the most powerful collars made anywhere in the world. The Intelo gets more range than any collar we have ever tested.

Q: Why do some Tracker collars have 2 antennas.

A: The Intelo and Supra Lite collars have 2 antennas to increase range. One antenna is the transmitting antenna and the other is called a "ground plane." Two antennas increases range 10 to 20%.

Q: Will the tracker collar interfere with my training (shock) collar?

A: There is no evidence that a training collar has been activated or inhibited by a Tracker collar.