

Transponder General Information



Poor location: Narrow window for detection. The signal can't be seen well.



Good location: No metal to block the signal, the detection window is very wide.

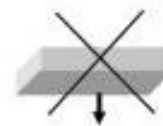
G3 Rechargeable Transponder



- The G3 rechargeable transponder operates using an internal non-removable battery. There are two LEDs, one green and one red on the transponders. When the transponders are fully charged and operational they will operate for approximately 7 days. The green LED will blink every 3 seconds. The number of blinks indicates the approximate number of days of charge left before the transponder will shut off. When the transponder is on the last day, it will begin to blink the red LED once every 8 seconds.
- Rechargeable transponders are mounted on vehicles using one of two types of holders. One type of holder is a plastic holder with two wings for bolting to a vehicle. The other type is a nylon fabric pouch variety with wings for bolting to a vehicle. *Note: Be sure to securely fasten the transponder to the vehicle before use. Unsecured transponders can be hazardous if they fall on the track.*
- The best possible orientation of the transponders is shown below in Fig 2. It is important that the transponder has no metal or carbon fiber between it and the track surface. Metal and carbon fiber will block the signal emanating from the transponder and the system will not be able to detect the crossing transponder.



The label side should be readable and in an upright direction. No metal should be between the transponder and the track surface



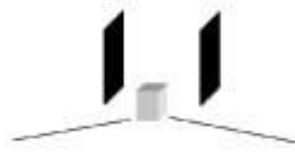
This is poor orientation and results in inconsistent performance

- *Note: There are other transponders, such as the rechargeable transponder TXLi2, that use a different orientation. Be careful about mixing the orientations.*
- No metal or carbon fiber between transponder and track. The transponder must have a clear shot to the ground.
- *Note: Signals can go through plastic so it is possible to use a piece of plastic as a mounting plate.*

Recessing the transponder can create problems such as shown below.



Poor location: Small window for detection, signal cannot be seen well



Good location: No metal to block the signal, detection window very wide.

Hardwire Transponder



- Strip the leads back to expose the copper wire. Be careful not to damage the wire when stripping.
- Attach one lead to a **fused** (1A, 20V+ rated) +9 to +20 volt supply and the other lead to the body frame of the vehicle that the ground (negative) terminal of the battery is connected to. It does not matter whether the red or black lead is connected to +12 volts and ground as long as one is at +12 volts and the other is grounded.
- Current drawn by the transmitter is low. However the transmitter should be connected such that the transmitter is disengaged when the vehicle is not running.
- ****Do not exceed +20 volts or the transmitter may be damaged.**
- When power is delivered to the transmitter both the red and green LED lights will turn on momentarily. The red LED will shut off and the green LED light will flash approximately once a second to indicate that the transmitter is operational.
- If only the red LED light is on, it indicates voltage is too low for normal operation. Do not allow the voltage to go below +9 volts.



The label side should face down toward the track. No metal should be between the label and the track.



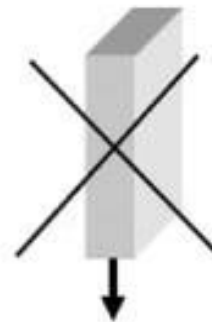
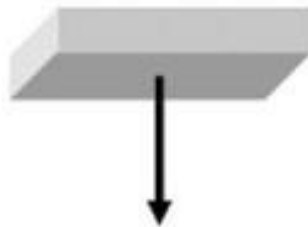
This is a poor orientation and will result in inconsistent performance.

- **Note: There are other systems that use a different orientation such as the one on the right. Be careful about mixing the orientations.**
- No metal or carbon fiber between transmitter and track. The transmitter must have a clear shot to the ground.
- **Note: Signals can go through plastic so it is possible to use a piece of plastic as a mounting plate.**
- It is possible to recess the transmitter, however keep in mind that recessing the transmitter

Rechargeable Transponder



- The rechargeable transponder operates using an internal non-removable battery. There are two LEDs, one green and one red on the transponders. When the transponders are fully charged and operational they will operate for approximately 7 days. The green LED will blink rapidly every 3 seconds. The number of rapid blinks indicates the approximate number of days of charge left before the transponder will shut off. When the transponder is on the last day, it will begin to blink the red LED once every 3 seconds.
- Rechargeable transponders are mounted on vehicles using one of two types of holders. One type of holder is a plastic holder with two wings for bolting to a vehicle. The other type is a nylon fabric pouch variety with wings for bolting to a vehicle. *Note: Be sure to securely fasten the transponder to the vehicle before use. Unsecured transponders can be hazardous if they fall on the track.*
- The best possible orientation of the transponders is shown below with the label side of the transponder facing the ground Fig 2. It is important that the transponder has no metal or carbon fiber between it and the track surface. Metal and carbon fiber will block the signal emanating from the transponder and the system will not be able to pick up crossing transponders.



The label side should face down toward the track. No metal should be between the label and the track. This is a poor orientation and will result in inconsistent performance.

- Label side of the transponder faces down toward the track. It does not matter which way the lights face. Those are just indicators of battery life.
- *Note: There are other systems that use a different orientation such as the one on the right. Be careful about mixing the orientations.*
- No metal or carbon fiber between transponder and track. The transponder must have a clear shot to the ground. *Note: Signals can go through plastic so it is possible to use a piece of plastic as a mounting plate.*

Recessing the transponder can create problems such as shown below.