



Applications Notes and Notices

Transmit Wattage Settings

The RF-Beacon™ standard-use setting is defaulted to 25mW. For RF-Beacon models with selectable power settings, the other selections should only be used for testing purposes. Depending on your governing ordinances, regulations, and licensing requirements, it may be illegal to operate the transmitter at certain power wattage outputs. Please check with your local governing agencies for rules and regulations pertaining to use of these 5.8GHz transmitters.

Note: Higher wattage setting will significantly reduce battery time.

Heat Exposure

The RF-Compass™ servo unit is not made to withstand direct, hot sun exposure. Prolonged intense sun exposure will warp the plastic housing and damage electronics.

360 Degree Rotation

Please note that the RF-Compass servo will rotate 360 degrees and therefore there is a possibility of 'coax cable twist' if allowed to rotate all the way around. Please position the RF-Compass so that the rotation will not exceed 300 - 320 degrees.

Positioning & User Environment

RF signals can bounce and reflect off of surfaces. If attempting to use the RF-Compass in a small room or with the servo unit positioned close to a wall, or with the RF-Beacon in close proximity to the servo unit, the 5.8GHz Beacon signal will reflect off of the walls and the servo will not be able to bi-angulate and lock onto the signal.

Scanning for Signal Lock

When scanning to acquire the frequency of the RF-Beacon, the Beacon to RF-Compass servo distance should be greater than 25 feet (see User Manual for details).

Note: Once the RF-Compass servo has acquired the signal, and if the RF-Beacon signal is lost or interrupted for more than 5 seconds, the servo unit emits a low volume beep.

Troubleshooting the RF-Compass™

Potential Causes of Improper Tracking

- 1). RF-Beacon battery low
- 2). RF-Beacon to RF-Compass servo antennas blocked. Wait for performer to move back into view of the RF-Compass servo unit and reacquire the signal, or reposition the RF-Compass servo unit to accommodate (avoid) the potential blockage.
- 3). The RF-Beacon has moved behind the RF-Compass servo antennas. In this situation the RF-Compass servo will not be able to track. Only solution is to get the RF-Beacon in front of the unit for normal operation.

Directionality of Paddle and Helical Antennas

Most pro-audio wireless paddle style antennas have an effective beam width pattern of around 90 degrees. Helical and Circular Polarized antennas can be even narrower. Obviously, the optimum alignment is zero degrees, with the antenna pointed directly at the transmitting source. This is because as the source moves away from the center beam pattern, the antenna gain decreases and you are also now dealing with reflective multi-path, etc.

If the RF-Compass is off by several degrees it is still an optimum situation, especially considering the alternative of a fixed antenna and/or with the performer being 30, 60, 120+ degrees off center. And if the RF-Beacon is temporarily blocked and not tracking, this is assumed acceptable. The bottom line, don't be overly concerned if the RF-Compass antenna alignment is not always a perfect.

RF-Beacon™ Battery Power

You must use an Alkaline 9V battery or a 9V battery of at least a 400mAH rating. At 25mW transmit power, the battery should last 2+ hours. Inside the case of the RF-Beacon, there is a display that flashes the channel settings (see User Manual for details). This flash can be seen through the opening at the top of the RF-Beacon housing.

Note: Towards the very end of the battery charge/life, the transmit power will decrease and hence the range will decrease.

Note: Sometimes 9V battery negative contact prongs are too tight/small and it is hard to snap the battery onto the RF-Beacon battery compartment contacts. Simply spread the battery's contacts a little for an easy snap-in fit (do not force the battery in as you may break the battery contact frame).

If you are experiencing difficulties operating your RF-Compass™ or have questions about your application, please contact the Kaltman Creations LLC technical support and applications specialist team at 864-885-0500, or email sales@kaltmancreationsllc.com.

Kaltman Creations LLC
The RF Experts