LARKS-RC

Lake Aircraft Radio Kontrol Squadron

AMA FRIA

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Upcoming Notable Events

- *There are no club events planned for June.*
- *June 25th 2026 Club Meeting, Tavares Civic Center, 6:30 pm.*

Editor Notes

If you are interested in providing an article of contribution for the newsletter or content for the web site, please contact the newsletter editor. Share a story about a build, flight, aircraft, anything interesting.

Send articles and information to editor@larks-rc.com

Become a contributor, it is easier than you think.

NEXUS-XR Control System Integrated 2.4GHz ExpressLRS Receiver

The NEXUS -XR revolutionizes based Control System by integrating a cutting-edge ExpressLRS receiver with dual Semtech SX1281 2.4GHz transceivers. This built-in receiver delivers exceptional RF performance, superior range, reliability, and effortless setup. It eliminates the need for external receivers, simplifying installation and reducing weight.

Fantom Signal Losses

Have you experienced a temporary or permanent loss of control of your aircraft? The feeling of watching your aircraft plummet to the ground, or fly away out of sight is heart breaking. Like entering into a haunted house - some think there are fantom ghosts or demons floating around our field that interrupt or steal your transmitter signal. Truth or Myth - Not really sure. You decide - how much is your aircraft worth to you?

Signal Loss

What causes signal loss? Before we look at the causes, lets take a look at the different manufactures and how they handle signal telemetry and what they consider to be signal loss and how to prevent it.

Futaba signal loss is often caused by 2.4GHz interference, damaged antennas, low receiver voltage, or carbon fiber shielding the signal. Common solutions include proper antenna orientation (at 90-degree angles), relocating antennas away from carbon/metal, performing a range check, and ensuring a stable power supply to the receiver.

Spektrum RC packet loss is monitored via telemetry using "Fades" (individual antenna signal loss), "Frame Losses" (simultaneous loss on all antennas), and "Holds" (45 contiguous frame losses/1 second of lost control). Normal flights may have 50–100 fades, but frame losses should be under 20; high numbers indicate poor antenna positioning, interference, or faulty hardware.

Jeti RC signal loss or "weak signal" warnings are often caused by antenna placement, carbon fiber shielding, or power supply issues rather than transmitter failure. Primary solutions include repositioning receiver antennas to avoid shading, ensuring proper battery voltage, and updating firmware.

FrSky transmitter signal loss is typically caused by receiver swamping at close range, damaged antenna elements, mismatched firmware protocols, or incorrect hardware configuration. Resolving the problem requires checking physical hardware integrity and verifying your internal system firmware settings.

ExpressLRS (ELRS) signal loss (RX Loss) is often caused by poor antenna placement (shadowing from carbon/battery), improper wiring, or interference, rather than a lack of range. Key solutions include positioning antennas away from metal/carbon, ensuring correct grounding, updating firmware to avoid known bugs, and checking for antenna damage.

There seems to be a common thread among these statements from the manufactures.

1. Antenna placement,
2. Power supply issues,
3. Hardware failure, and
4. Carbon fiber sheilding.

So the question begs, is one better than the other. In my humble opinion, based on experience having flown Spektrum, Futaba, FrSky and Radio Master, I prefer the Radio Master with ELRS TX and RX.

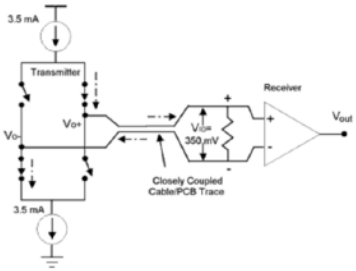
Simple answer, you do you. There are so many choices, brands, protocols etc. Personal preference and a feeling of comfort is one of the keys to success. On the other hand, knowing and understanding your equipment and how to set it up is another key to success.

What to do if you experience enough interference that you loos control of your aircraft. If all else fails, stand still, take a deep breath and watch the aircraft fly out of site, or worse yet, head to the ground like a lawn dart and disintegrate into many pieces.

This brings a question to mind - How do you have your fail safe set up? You answer, what is fail safe? That tells me all I need to know. You likely do not understand your equipment when it comes to signal loss, and have no understanding of what the aircraft should do, during signal loss.

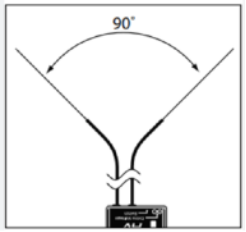
From Ai, fail safe is best described as: RC failsafe is a critical safety feature that protects your model from flying, sailing, or driving away out of control. If your receiver loses the signal from your transmitter—or if the receiver battery drops to dangerously low levels—the failsafe forces the servos or flight controller into a pre-programmed, safe position.

Yes, you can program the aircraft to do a number of things when it experiences a loss of signal. Like level out and fly straight, level out and circle, etc. The attitude of the aircraft during a signal loss is dependent on the equipment you are using and the settings you made while initializing fail safe. If you are not sure about what we are discussing when it comes to fail safe, I suggest you speak with someone who does and get some understanding, or check your transmitter and receiver manual or manufacturers web site. You may learn something.



Solutions

Antenna Placement - The antenna placement is dependent on a couple of factors. The receiver manufactures recommendations, the type of aircraft the receiver is installed in and the placement of the receiver. Most manufactures recommend the 90 degree rule. Place the antennas at 90 degrees apart.



Power Supply Issues - Ensure the BEC output voltage value is not compromised when the craft is in flight. What? Monitor the RxBat value when flying. There are times when a BEC output voltage drops during high servo loads. If the value drops below a specified value, the receiver no longer communicates with the transmitter.

Hardware Failure - Usually occurs on older receivers, or receivers that have been repurposed. How may receivers do you own, that you bought at swap meets or recovered after a crashed aircraft? Do you know if the receiver is working properly? How is the integrity of the receiver? It may look good on the outside, but may not be so nice on the inside. Most manufactures will allow you to send the receiver in for testing and repair.

Firmware Mismatch - Is your receiver at the latest version of the firmware and are the radio transmitter and receiver on the same version or if not are the firmware versions compatible.

Carbon Fiber Shielding - Most common in newer airplanes that are manufactured using carbon fiber or carbon fiber coated balsa. On these craft, consider extending the antenna outside of the craft, or along the sides of the craft taped to the monocote away from the carbon fiber.

Wrap Up

As we have discussed, there are many possibilities and or conditions that can cause a signal loss between the transmitter and the receiver which can result in an aircraft to fly away or fall from the sky.

As a RC Pilot, you have an obligation to ensure your equipment is set up correctly and functioning properly. There are a number of checks that you can do to ensure you have done everything in your power to meet the general safety requirements.

Question - How often to you perform a range test? Sounds like another article.

In summary, do all you can to make sure you understand your equipment, check your radio and receiver, and set the fail safe. A bit of prevention goes a long way.

There are many seasoned and knowledgeable members of the club that are willing to offer support to those who ask. But, you have to ask and then most important listen and act.

Some of the guys flying Spektrum transmitters and receivers have had good success by adding a remote receiver to their systems.
https://www.spektrumrc.com/product/dsmx-remote-receiver/SPM9745.html

Understanding Spektrum Signal Metrics (Flight Log)

- Fades (FdeA): Represents a minor loss of information on a single antenna. Moderate numbers (50-100) are normal; over 500 in one flight suggests poor antenna placement.
- Frame Loss (F): A simultaneous fade on all antennas. These should be minimal (typically under 20 per flight).
- Hold (H): 45 consecutive frame losses (~1 second). A hold means control was lost/failsafe occurred, which should never happen.

Common Causes of Packet Loss

- Poor Antenna Placement: Antennas too close to carbon fiber, batteries, or large metal components.
- Shadowing: Components blocking the RF line of sight between transmitter and receiver.
- Weak Power Supply/BEC: A faulty BEC or low-voltage battery can cause receivers to drop packets, especially under servo load.
- Range Issues: Operating beyond the effective range, or improper setup of "Fly-By" telemetry receivers, which have shorter range than full-range receivers.

Troubleshooting Steps

- Optimize Antennas: Ensure antennas are at 90-degree angles to each other and far from metal/carbon/wiring.
- Check Flight Logs: Review the telemetry data (FdeA, F, H) for specific antennas that are causing the most issues.
- Range Test: Conduct a proper 30-pace range test to ensure the system is working.
- Check Receiver Connections: Ensure satellite receivers are securely connected, as they provide diversity and reduce frame losses.
- Update Firmware: Ensure both transmitter and receiver are on the latest, stable firmware.

Gas Turbine Aircraft

During the April Meeting a concern was brought up by a member with regards to flying gas turbine powered aircraft at our field during times when the county is in a high or greater risk of fire. The issue was discussed and an agreement reached, when Lake County is in a High or greater risk of fire danger, flying gas turbine powered aircraft will be prohibited.

If you own a gas turbine powered aircraft, it is your responsibility to check the County Fire Danger Index prior to flying your aircraft. You can check the status by going to the club web site, main menu, and clicking on the Fire Danger Index, Florida Link.

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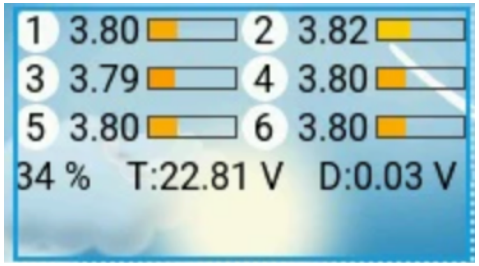
PLEASE CHECK BEFORE YOU FLY

Radio Master Voltage Censor - a must have for electric powered aircraft.



The display presents all cell voltages, total and individual to the radio for real time monitoring and alarming.

Are you interested in supporting your club by becoming an Introductory Pilot Instructor? Check out the links on the last page of this newsletter. Support for new and introductory pilots is always needed. Join now, enjoy the rewards of sharing your experience and knowledge.

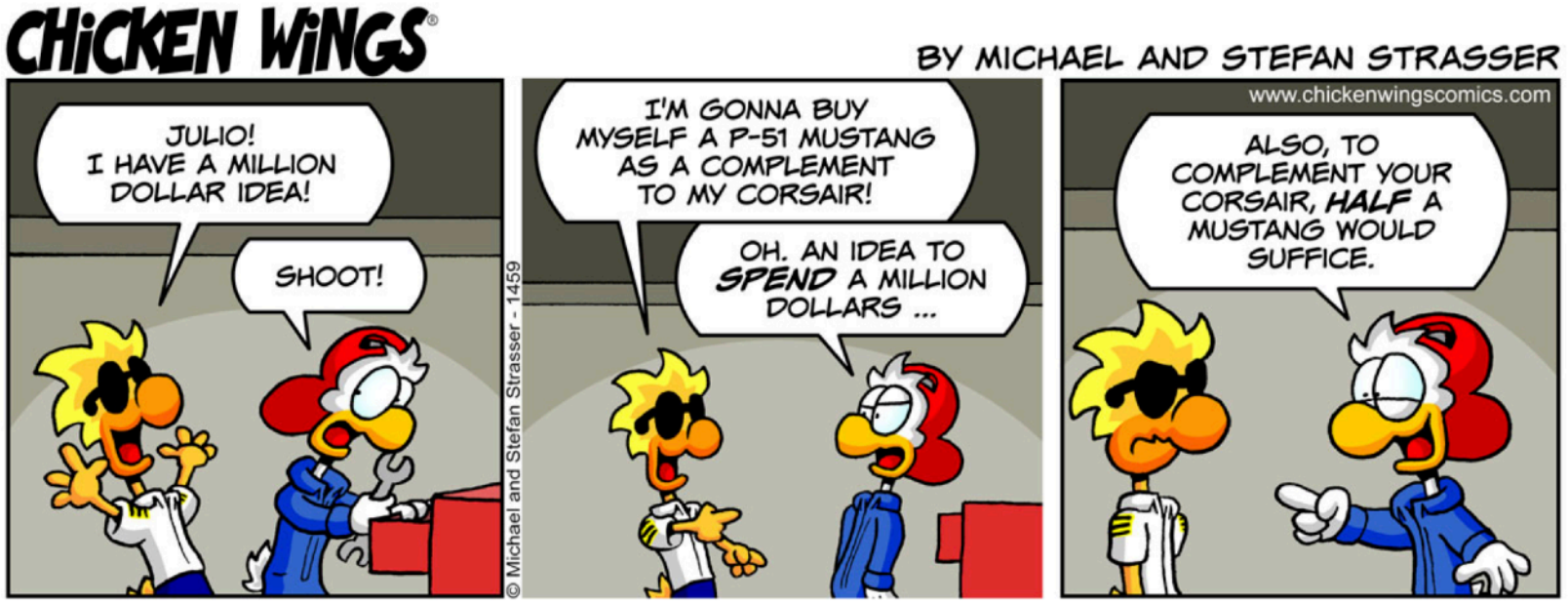
RMRC
WWW.READYMADERC.COM

From the April Meeting

A number of amendments to the club by laws were submitted by members. After much discussion, there was a decision form a committee to review the presented amendments and bring recommendations to the club.
Read below from the meeting minutes.

By Laws there was much discussion about the proposed changes. The change proposed by the Club officer did not pass. (Adding the member capacity limit to the bylaws)

David Clutts offered to head a group of club members to review each of the proposed article changes. This group would prepare the proposed By Law article changes and present them at a future meeting. These would be sent out to members at least two weeks before they would be presented for vote.



Hobby King - Do you purchase items from Hobby King? If so, please use the link provided on the club web site and in this email to get to the Hobby King Web site. Using the club link, ensures you get the club discount. In addition, the club is a partner with Hobby King and we receive 2% of all purchases made.

Hobby King Link. Discount code LARKS5

RCBattery is a member of our network and provides a 15% discount on all batteries purchased by our club members. Batteries already discounted are not eligible for the member discount.

RCBattery Link.

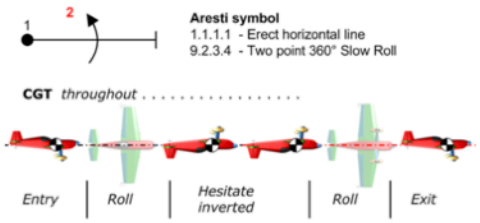
Discount Code - LARKS!RCBJUN26

More from the club meeting - the Flying Site Improvement Grant was approved and we received $3000.00 from the AMA. The grant was submitted after the runway was completed. Thanks to the AMA for the funds.

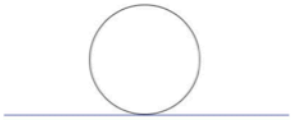
Exclusive Offers

In addition to the great resources, tools, insurance, publications, having a voice in Washington, and so much more...as an AMA Member you also receive discounts from our participating partners.

How to Fly a Slow Roll – Horizontal Roll



Visualise an imaginary circle around the horizon with the bottom of the circle situated on the horizon. If the bottom of the circle is below the horizon, you will descend. Note that the slower the IAS, the greater the aircraft's angle of attack and so the larger the circle will need to be to ensure you don't descend.



Then:

- Apply Aileron (left or right depending on the roll direction and deflection depending on the rate of roll you require)
- Top rudder and forward stick when approaching knife edge (opposite rudder to aileron in the first quarter of the roll)
- Forward stick when inverted to keep the nose up with no rudder
- Top rudder and forward stick when approaching knife edge (the same rudder to aileron in the third quarter of the roll)
- Centralise the rudder and apply back stick when completing the maneouvre. Be sure not to over control or grip the stick too tight otherwise the aircraft will wobble or bobble untidily.

Common Mistakes

- Rolling without rudder – Most modern aerobatic aircraft roll very quickly, especially the Extra. Many people simply pile on lots of aileron and never learn the correct technique. This does look vaguely okay for fractions of a roll or even for a full roll, so can tell when people do this because of the 'bobble' afterwards, but as they progress along the difficulty ladder and have to fly in front of more discriminating audiences or need to fly multiple rolls, their lack of technique shows through. It is best to roll slower with the correct rudder and elevator inputs initially and increase the rotation speed with practice. You won't get marked down for slow roll rate and it will save you having to relearn slow rolls later.
- Nose not high enough when inverted
- Pulling off heading in 3rd quarter – It is also very common for the aircraft to be pulled off heading in the 3rd quarter of a 4 point roll. This is caused by the pilot failing to remove the angle of attack in the 3rd quarter while in knife edge.

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LARKS RC Discount Code - 15% discount is available during the month June 2026

Discount available to all readers of the LARKS Newsletter.
Discount do not apply to already discounted or reduced items.
Simply go to RCBATTERY.COM and enter the discount code on the payment page.

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Become a club ambassador and flight training instructor. Visit AMA for more information.

https://www.amaflightschool.org/blog/intro-pilot-ground-school-live

Pre-Flight Checklists

Performing a pre-flight checklist before each flight is an important safety step. Be aware that your model aircraft may have other specific items that

Fold to Flight: An Educators' Hands-On Pathway from Paper Planes to Advanced Drones

Fold to Flight is a free project introducing students to aviation through paper airplanes and other models, enhancing skills and knowledge.

Club Flight Training Manuals

Flight Training Manuals Collection This is a collection o Training Manuals we've received from several AMA clubs. These