

2.4GHz Teething Troubles Bite Many Users ...www.modelreviews.com

HARD TO FIND A PROBLEM-FREE SYSTEM



Spread spectrum radio control equipment on the 2.4GHz band has now been around for well over a year and it's hard to find a single system that hasn't had at least a few teething problems.

It's only natural that such a dramatic shift in technology will result in unforeseen issues raising their heads and no manufacturer is immune to this.

Perhaps what is more important than the fact they've all had problems is the way that each manufacturer has addressed those problems and the amount of support they've offered to their customers.

Here are a list of the known issues to date and the manufacturers' responses. You can draw your own conclusions as to what's good and what's not.

Spectrum/JR



One of the very first to offer a 2.4GHz system and now the most popular brand, having many times more systems in use than any other manufacturer, it's only natural that the problems encountered by users of this equipment would be more widely known.

The very first systems suffered from a very slow re-link time (as much as 10 seconds or more) in the event that the receiver rebooted due to low-voltage or a voltage spike.

This problem was exacerbated by the fact that the systems were shipped with just a 4-cell (4.8V) receiver pack which could easily be pulled down to 4V or less by several servos operating simultaneously. That's a voltage low enough to cause the receiver to reboot, effectively causing all control to be lost. The problem was also made worse by the number of people flying electric models with inadequate BECs that would also allow the receiver voltage to drop low enough to cause a reboot.

To their credit, the manufacturer has quickly addressed the problem and now there are several "fixes". Firstly, the software in the receiver has been updated to allow a [faster relink](#) time (often under 1 second) in the event that the receiver reboots.

Secondly, a "supercapacitor" is available that will help reduce the effect of momentary voltage spikes or drops -- acting like a very tiny backup battery.

Thirdly, users are now encouraged to use a 5-cell (6V) receiver pack so as to allow far more "headroom" between the reboot voltage and that delivered by the battery.

The next issue affecting JR/Spectrum gear was that of poor switch wiring on the AR9100 receiver. A stray wire could cause these "smart" switches to fail. This was quickly addressed by both users and the manufacturer.

Most recently, users of the X9303 transmitter have found that internal wiring can have its insulation worn away by contact with an internal regulator device. Once again the manufacturer has been quick to post [this advisory](#) and offer a free repair for anyone whose gear may be affected.

Futaba FASST



The first problem with the Futaba FASST systems was the zero GUID issue which saw some sets losing a small but critical part of their memory which resulted in multiple systems interacting in a rather unpleasant way. In effect, two systems that suffered this problem could end up shooting each other down.

This problem, and the manufacturer's response was outlined in [an earlier RCModelReviews story](#).

A more recent, and potentially just as critical issue has been discovered by those using the FASST system in the heat of summer.

A growing number of crashes and near-misses have been attributed to the effect of high ambient temperatures on the FASST receivers.

Independent tests (conducted by FASST owners) indicate that once these receivers reach or exceed a temperature as low as 120 deg F, they simply shut down and stop working. When the temperature is lowered, normal operation is restored.

Once again, the US distributor for Futaba remains non-committal and apparently unwilling to even acknowledge the existence of the problem. There is therefore, no fix at this stage and commonsense suggests that anyone flying FASST in high temperatures should take great care to ensure their models are kept out of the sun when not being flown.

Some FASST users have even taken to fitting onboard fans to keep their receivers cool and thus reduce the chances of the heat problem affecting them.

JR/Spektrum have taken advantage of this problem with FASST by launching an advertising campaign that promotes the fact their receivers work quite happily at temperatures up to 300 degrees F. Talk about rubbing salt in the wound!

XPS module/receiver



After a very problematic period of almost two years when some XPS-equipped models appeared to fall from the sky for no apparent reason, things are now looking up.

An initial lack of useful frequency agility (continuously denied by the manufacturer) has finally been addressed and now it appears to be as good as any other module-based product on the market.

It's just a shame that the company refused to acknowledge the concerns of experts in the field who pointed out the very obvious deficiencies right from day one.

Never admit fault, never apologize seems to be the XPS motto -- but at least their product is now sound and reliable.

Airtronics 2.4GHz

Believe it or not, the Airtronic system appears to have been virtually problem-free at this stage.

No reboot issues, no temperature related problems, no unexplained shoot-downs.

I'll be keeping a close eye on this gear over the coming months and once they actually get a decent transmitter in the loop, I'll buy one for review. The current 8000 transmitter is woefully inadequate when compared to the equivalent Futaba or JR offerings and the system is not available as a module-based upgrade to other RC systems.

Corona 2.4GHz module/receiver

Unfortunately, Corona has had more than a few issues getting this product to the market.

The first samples were given to beta-testers nearly six months ago but not released to manufacturing due to a number of issues that the company claims are now resolved.

However, the first production run appears to have been plagued with problems and the unit purchased for review here was effectively dead on arrival. Corona have said they'll ship a replacement and when that arrives it will be tested.

iMax 9X

Some users have reported similar issues to the Assan modules in respect to the effects of a busy 2.4GHz environment. Others have found that the iMax transmitter may have a few software glitches related to programming.

My own iMax 9X continues to work flawlessly however, although there are usually no more than two or three other 2.4GHz systems in the air at once where I fly and I am not using any of the more sophisticated mixes in the transmitter.

One other iMax 9X in our club also worked flawlessly until its owner reversed the battery connector. No radio will react well to such abuse.