20 February 2012

Marketing Bulletin

Large Ag Marketing

To: Region 4 - Ag Dealers

Subject: Frequency Migration FAQ

Migration of StarFire™ Frequencies

Due to an industry reorganization of the L-band spectrum allocation, the StarFire™ network worldwide will migrate frequencies between January and March 2012. All entities using this band in agriculture related and other applications will be impacted by the reorganization. Broadcast of StarFire differential corrections on the current frequencies will stop at the end of this migration period. Users who do not update their receiver or power on their receiver during this timeframe will not be able to pick up StarFire™ corrections on the new frequencies. Depending on the receiver model, the user may need to update software or manually input the new frequency. Dealers should consult AMS DTAC for more information. Producers may contact their John Deere dealer or the Customer Contact Center.

Link to DTAC solution: http://dtac.deere.com/Solutions/English/91144.htm

Will this change affect receiver performance?

All signals on the old frequencies will cease distribution on 23 March, 2012. If the new frequencies are not entered into the receiver prior to that point using one of the approved methods(see DTAC solution), the receiver will not be able to receive StarFire corrections and will go to 3D WAAS or EGNOS and not navigate. However, once the new frequencies are entered, receiver performance will remain the same as it is today. The same differential corrections will continue to be broadcast, only on different frequencies.

Why is this change happening?

Multiple entities use the L-band spectrum to broadcast different types of information around the world. In addition to precision agriculture differential corrections, other industries using this band include aeronautical, maritime and construction companies. This spectrum is fixed in size, but the number of users is increasing. As a result, there is a concerted industry effort to more efficiently organize the distribution and allocation of frequencies within the spectrum.

How is John Deere affected?
John Deere broadcasts StarFire differential corrections using bandwidth in the L-band on satellites operated by Inmarsat. Due to the reorganization of the spectrum, Inmarsat's available frequencies are being consolidated. StarFire receivers need to know which frequencies they should listen to so they can receive SF1/SF2 corrections. This information can be entered into the receiver either with over-the-air almanacs, by updating software or by manually entering the frequency in the setup pages.

Is this reorganization a result of the proposed 4G wireless coverage for the US?
No. Many companies have used this spectrum for several years, and for many purposes as described above. This frequency change is independent of any proposed future use of the spectrum.

Have we ever had to do this before?
Yes, we have had to change satellites in different parts of the world which required users to manually enter a new frequency in their receiver in order to pick up StarFire corrections. The difference this time is that the frequencies are changing on all six satellites simultaneously, rather than one or two.

Will the new frequencies be any more or less susceptible to issues we've seen in the past with possible interference from other devices on the machine?
The probability of interference on the new frequencies is no different than on the old frequencies. If a customer did not have problems before, they shouldn't have problems with the new frequencies either. In addition, most of the interference issues observed in the past concerned L1 and L2 GPS signals, not the L-band signal carrying StarFire corrections. The L1 and L2 signals are not impacted by this frequency change.

Are RTK receivers affected?
Yes. RTK receivers use the SF2 signal to generate and apply localized RTK corrections. Both the base station and the rover need to be updated.

Will dealers be compensated for updating customers' receiver software?
No. This change is not a warrantable failure or defect on the part of John Deere. As with any other regular software bundle, dealers will not be able to claim reimbursement for time or travel to update customers' equipment.

Will we have to do this again in the future?
There will always be a chance that these frequencies will change at some future date as technologies evolve. Additional uses for any given broadcast spectrum will be developed over time. However, the purpose of this spectrum reorganization is to mitigate any impact of future changes to existing users. The industry is trying to be more proactive and structured in assigning available bands.

Please contact the Sales Support Center or your field team with further questions.