



Service Bulletin

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SERIES: **Advanced Farming Systems (AFS®) - Aftermarket Displays**

MODELS AFFECTED: **Advanced Farming Systems (AFS®) , Aftermarket Displays**

GROUP - SUBGROUP - DEFECT: **55 911**

Subject: **RTX SATELLITE FREQUENCY CHANGE**

DESCRIPTION

REVISION EXPLANATION

This document replaces the previous bulletin (release date 03 December 2018) for the following reasons:

- Additional frequency information for the North American Region (NAR)

REVISION EXPLANATION

This document replaces the previous bulletin for the following reasons:

- New satellite beam information

This Service Bulletin informs you that the RTXAE, RTXWN, RTXCN and RTXEN satellite beams will stop broadcasting Trimble RTX™ corrections on

- 01 June 2019 for RTXAE .
- 01 July 2019 for RTXWN, RTXCN and RTXEN .

The changes have been made to allow implementation of an Advanced Encryption Standard (AES) defined encryption to the satellite beam.

The change results in:

- Improved integrity of the correction data stream from the satellite.
- Improved security of the correction data stream from the satellite.
- Provides the customer with better service reliability
- Provides the customer with greater access to the RTX network.

This change affects customer units in countries in the Europe Middle East Africa (EMEA) region, some countries in the Asia Pacific (APAC) region and the North American Region (NAR), which use the Trimble RTX™ based services.

The new RTXEA satellite beam for the EMEA region:

- Replaces the previous RTXAE satellite beam
- Broadcasts on the frequency 1545.4900 MHz with a baud rate of 2400bps
- Will be active from 01 December 2018 to provide users and dealers with an overlap period to enable the switch over to the new frequency before the old one is disabled

The new RTXNA satellite beam for the NAR:

- Replaces the previous RTXWN, RTXCN and RTXEN satellite beams
- Broadcasts on the frequency 1555.8080 MHz with a baud rate of 2400bps
- Will be active from 14 February 2019 to provide users and dealers with an overlap period to enable the switch over to the new frequency before the old one is disabled.

Region	New beam (AES encrypted)				Old beam		
	Beam name	Frequency (MHz)	Baud rate Activation date	Activation date	Beam name	Frequency (MHz)	Deactivation date
EMEA	RTXEA	1545.4900	2400	01 December 2018	RTXAE	1539.8125	01 June 2019
NAR	RTXNA	1555.8080	2400	14 February 2019	RTXWN RTXCN RTXEN	1557.8615 1557.8150 1557.8590	01 July 2019

NOTE: Although the satellite frequency for the North America region will not be active until 14th February 2019, this bulletin is still applicable to dealers because they can use the advanced notice to ensure that their customer's equipment is updated to the minimum software versions as the below text explains.

The Trimble RTX™ based services that the change of satellite beam affects are:

- CenterPoint® RTX
- CenterPoint® RTX Fast
- RangePoint® RTX
- ViewPoint RTX™
- xFill®
- xFill® Premium

NOTE: CASE IH strongly recommends to change to the new Trimble RTX™ satellite frequency, as soon as the new frequency is active. This action will ensure that there is no interruption to the Trimble RTX™ correction services.

ACTION

PRODUCTION

Not applicable.

SERVICE

Use the below instruction to configure the relevant Global Positioning Satellite (GPS) receiver to the new frequency.

Unit preparation

NOTE: The four reference points to the unit are the left-hand side, the right-hand side, the front of the unit, and the back of the unit. These reference points apply to someone that faces the direction of travel from a standing position that is behind the unit.

WARNING

Avoid injury!

Before you start any work on the unit, prepare the unit according to the following instructions. Failure to comply could result in death or serious injury.

W1403B

1. Thoroughly clean the area on the unit that pertains to the service instructions for this Service Bulletin.
2. Park the unit on a hard, level surface.
3. Apply the parking brake.
4. Completely lower any attachments to the ground.
5. Relieve all of the hydraulic system pressure.
6. Shut down the engine.
7. Follow any specific instructions that pertain to the unit within the service instructions as necessary.

Service instruction

To operate with the new AES encrypted satellite beam the display and/or GPS receiver must be upgraded to the minimum software version or higher. The minimum software version is shown in the below table:

Device	Minimum Software version
XCN-1050	V1.01
XCN-2050	V4.2.1
AG-372 Display	V8.20 V30.16
FM750	V7.75
FM1000	V10.01
CNH NAV-900 (GPS)	V1.66.20.4

After updating the software to the minimum software version or higher, complete the relevant below instruction to configure the display to the correct frequency and baud rate.

NOTE: If the device is already updated to the minimum software version or higher, you can contact the customer by telephone to instruct how to configure the receiver to the new frequency. This action will negate the need for a customer visit.

FM1000

Use the GPS receiver setup menu in the 'FM1000' display to configure the new frequency and baud rate. Refer to the 'Connectivity Settings' > 'GPS Receiver Settings' section in the user guide of the 'FM1000' integrated display for more information on how to configure the new frequency and baud rate.

XCN2050 (Precision IQ™ Application)

Use the 'GNSS' setup menu in the 'Precision IQ' Application of the 'XCN2050' display to configure the new frequency and baud rate.

Refer to the 'Connectivity' > 'GNSS Receiver Settings' section in the 'XCN2050' Application User Guide for more information on how to configure the new frequency and baud rate.

XCN2050 (FM1000 Plus Application')

Use the GPS Receiver Setup menu in the 'FM1000 Plus Application' of the XCN2050 display to configure the new frequency and baud rate.

Refer to the 'Connectivity Settings' > 'GPS Receiver Settings' section in the user guide of the 'FM1000 Plus Field Application' for more information on how to configure the new frequency and baud rate.

AFS Pro 300 and AFS Pro 700 displays

Before you can configure the new frequency on the AFS Pro 300 and AFS Pro 700 displays, you MUST upgrade the display software to 'Precision Farming' software V30.16.0.0 or later. This software was released in early 2017 to support an RTX satellite frequency change and includes a user interface change which allows the operator to enter a custom frequency and baud rate. Therefore, the majority of systems working with RTX or xFill in the field should be operating with this display software version already.

NOTE: When you update the 'Precision Farming' software, make sure to also update all related applications to avoid any incompatibility concerns. If the vehicle has a Global Positioning System (GPS) receiver and/or a Navigation (NAV) Controller, make sure to also update these items.

Follow the below instruction to update the software on a NAV controller and a 372 receiver. If you follow the below instruction you negate the need to complete the auto-guidance calibration following the software update.

NOTE: If you are upgrading from a software version prior to auto-guidance display software V30.2.0.0 and/or NAV controller software V9.00, you MUST carry out a new auto-guidance calibration after the below software updates. The calibration is necessary because of the changes in the NAV controller software that require a new calibration after the NAV has been updated to the latest level.

NOTE: If the vehicle operates with an RTK signal, make a note of the NTRIP settings, and/or, the RTK radio frequencies prior to the upgrade of the software. You must manually enter these settings after the software update is complete.

1. Make a copy of the CN1 folder from the display to your computer by copying it from the Universal Serial Bus (USB) memory device of the display.
Refer to the AFS Pro 300 and AFS Pro 700 display Service Manual for more information on the retrieval of the CN1 folder.

eTIM link: **Software - Download - Copy the .cn1 folder for submission to ASIST**

NOTE: You will use the CN1 folder later to automatically reload both the previous display settings, and, the auto-guidance calibrations back onto the display.

NOTE: If you use the EST DPA5 tool to update the display software files, it is not then necessary to remove the customer's USB device during the update. Both the display settings, and the auto-guidance calibrations will load automatically to the display from the customer's USB when you switch on the display after the software update.

2. Complete the software update to the display. For more information on the update of display software, refer to the instruction in the AFS Pro 300 and AFS Pro 700 display Service Manual.

eTIM link: **Software - Program - Perform a clean installation of display software**

NOTE: After the completion of the software update, switch off the display and insert a memory device into the USB socket of the display. The USB memory device should contain the copied CN1 folder from Step 1. Failure to insert the USB with the copied CN1 folder from Step 1 will result in the loss of, the auto-guidance calibrations, and, any display settings, when you switch on the display.

3. Update both the NAV controller, and, the 372 receiver with the information in the AFS Service Manual.

eTIM link: **Software - Program - Program NAV II/NAV III controller and receiver firmware**

The 372 receiver should be updated to V8.20.04.4 or later,

The NAV controller should be updated to V9.26.10.4 or later.

After the completion of all the software updates, switch on the display and navigate to the 'Toolbox' > 'GPS' screen to configure the frequency and the baud rate.

For more information on how to configure the frequency and baud rate refer to the AFS software operating guide.

eTIM link: **"GPS Setup" screen**

NOTE: When you use xFill™ no changes need to be made to the xFill™ datum, the previous configuration parameters should remain without change.

WARRANTY STATUS

Service Bulletins DO NOT constitute warranty authorization to update units, unless stated otherwise.