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ADVISORY

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GE MDS MERCURY FIRMWARE 3.0.6 RELEASE ANNOUNCEMENT REQUIRED FIRMWARE UPDATE & CHANGE TO FREQUENCY BAND EDGE LIMITS

Introduction

This document explains a required change to frequency band edge limits affecting all MDS Mercury 16e WiMAX products operating with firmware prior to the latest release, 3.0.6. In order to restrict installer configuration and device operation to within these limits, it is necessary that all Mercury radios be upgraded to this latest release. This document also explains possible system impacts and provides a firmware upgrade processes to minimize system interruption.

Symptoms & Cause

To ensure regulatory compliance, center frequencies for the Mercury 3650, 1800, and 5800 products must be limited to a range determined by the agency order option (regulatory body) and bandwidth setting. Currently supported frequencies are listed below.

Mercury 3650 FCC Version:

Products: MERBINB, MERSINB, MERSONB
Locations: United States, South America

<u>Bandwidth</u>	<u>Frequency Range</u>
3.5MHz	3653.00MHz - 3672.00MHz
5MHz	3653.75 MHz - 3671.25 MHz
7MHz	3654.75 MHz - 3670.25 MHz
8.75MHz	3655.75 MHz - 3669.25 MHz
10MHz	3656.25 MHz - 3668.75 MHz

Mercury 3650 IC Version:

Products: MERBINB, MERSINB, MERSONB
Locations: Canada

<u>Bandwidth</u>	<u>Frequency Range</u>
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3.5 MHz	3653.00MHz - 3697.00MHz
5 MHz	3653.75MHz - 3696.25MHz
7 MHz	3654.75MHz - 3695.25MHz
8.75 MHz	3655.75MHz - 3694.25MHz
10 MHz	3656.25MHz - 3693.75MHz

Mercury 1800 IC Version:

Products: MERBINA, MERSINA, MERSONA
 Locations: Canada

<u>Bandwidth</u>	<u>Frequency Range</u>
3.5MHz	1806.25MHz - 1823.75MHz
5MHz	1807.00MHz - 1823.00MHz
7MHz	1808.00MHz - 1822.00MHz
8.75MHz	1808.75MHz - 1821.25MHz
10MHz	1809.50MHz - 1820.50MHz

Mercury 5800 FCC Version:

Products: MERBINE, MERSINE, MERSONE
 Locations: United States, Brazil

<u>Bandwidth</u>	<u>Frequency Range</u>
3.5MHz	5728.75 MHz - 5846.00MHz
5MHz	5729.50 MHz - 5845.25MHz
7MHz	5730.50 MHz - 5844.25MHz
8.75MHz	5731.50 MHz - 5843.25MHz
10MHz	5732.00 MHz - 5842.75MHz

Corrective Action

1. To ensure regulatory compliance, customers must ensure they are using frequencies within the supported frequency range as specified above for the Mercury 3650, 1800, and 5800 products
2. Customers currently using frequencies outside of the supported range must change radio frequency configurations such that all frequencies are within the specified limits. This can be done from the Radio Configuration menu.
3. To ensure proper frequency configuration, customers must upgrade all radios to firmware version 3.0.6 or later.
4. Firmware version 3.0.6 enforces appropriate frequency limits. In the case of configured frequencies outside of the applicable range as specified above, upgrading to firmware version 3.0.6 will reset frequency to the factory default setting.

Firmware Upgrade Instructions – Special Procedures

Upgrade of all radios to 3.0.6 firmware is required to enforce operation within regulatory limits. Firmware may be downloaded from the GE MDS website at www.gemds.com. Basic Firmware download procedures are provided in the *MDS Mercury MIMO Reference Manual* (05-06302A01-B), also available from the GE MDS website.

When upgrading to 3.0.6 firmware, use the following additional procedures.

1. Determine if your system's current operating frequencies are supported by firmware 3.0.6. Refer to the supported frequencies above.
2. If radios are currently operating at an unsupported frequency, they should be changed to a supported frequency before upgrading to 3.0.6. Upgrading to 3.0.6 on a radio with an unsupported frequency will result in undesired system behavior.

Changing the frequency of a radio will disrupt network operations until the Base Station and all Subscribers associate at the new frequency. To minimize disruptions, change the frequency of affected Subscribers first before changing the frequency of the Base Stations.

If using repeaters, change the frequency of the Subscriber farthest in hops from the backhaul first, and then work your way up through the repeater, changing the repeater Base Station before the repeater Subscriber.

3. Once all radios requiring frequency changes have been configured, verify that the radios link at the new frequency.
4. Once any required frequency changes are applied and connectivity is verified, proceed with the normal firmware upgrade procedure and reboot. Firmware download procedures are provided in the Mercury Manual. As long as configured frequencies are within the supported frequency range, radios running 3.0.6 will associate after reprogramming without further configuration.

Additional information regarding this release is contained in the Release Notes. If you have any questions, please contact your GE MDS representative or GE MDS Technical Services.

End of Product Bulletin