# telestream

**SPG9000**

**Timing and Reference System**

**Release Notes**

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# Release notes

This document describes new features, fixes, and improvements of firmware version 1.0.1 for the SPG9000 Timing and Reference System.

## Product Updates

**Upgrades**   All SPG9000 products are eligible for upgrading to 1.0.1 using the standard upgrade process. All customers with 1.0 are encouraged to upgrade as soon as possible to take advantage of the bug fixes and stability improvements.

**Downgrades**   There are currently no downgrades possible.

## New Features

Version 1.0.1 is a maintenance release for the SPG9000 product providing critical bug fixes and stability improvements. No new features are included in the 1.0.1 release.

The previous 1.0 release provided the following functionality:

- Two independent 1G/10G ports for PTP, supporting dual leader, dual follower, and follower + leader configurations

- Integrated multi-system (GPS, GLONASS, BeiDou, Galileo, QZSS) dual-band GNSS receiver for a highly accurate and reliable timing source

- Analog genlock input and multiple sync outputs for legacy and hybrid SDI/IP facilities

- Secure web interface for remote operation and REST-style HTTP API for easy integration with third-party management software

## Resolved Issues and Improvements

This firmware release has resolved the following issues and make the following improvements to the previous 1.0 release.

**Black Outputs**  Report Power On Self Test (POST) failure if Black outputs do not boot correctly.

**GNSS**  Fixed GNSS issue which could cause a crash and reboot.

**PTP/Genlock**  Corrected errors in the PTP message flag bits.

Improved the start-up of PTP leaders to prevent briefly sending incorrect time.

Removed second DHCP service in the PTP engine.

Fixed a drift issue in the OC leader mode.

Improved power-on preset of genlock and PTP modes.

**System**  Reduced load test duration of the reserve power supply to improve load resistor lifetime.

Improved operation of USB port when used for software upgrades.

Improved security by enhancing the Web UI and API password functionality.

Improved security by adding a session time-out on the Web UI.

Fixed a problem with separation of Active and Preferred power supplies.

Improved use of the RTC to set MTOD on start-up.

Improved the synchronization of parameters on the Web UI and front panel menus.

# General Limitations

**Web Interface and API**  When restarting the instrument, wait for 60 seconds after the front panel STATUS menu appears before opening the web interface or using the HTTP API.

**USB Firmware Upgrade**  Wait for 20 seconds after inserting the USB memory device before accessing the SYSTEM : FIRMWARE UPGRADE menu on the front panel.
If the device is not recognized, restart the instrument with the memory device still inserted in the USB port.  Unplug the power cables and plug them back in again after a few seconds.

After the firmware upgrade process has started, wait for the STATUS menu to appear on the front panel display to confirm that the upgrade has completed.  At this time, restart the instrument again.

When the USB memory device is removed from the SPG9000 and used on another computer, it may report that the device needs to be repaired.

**PTP Ports**  The SFP modules should be installed before changing the network settings for the PTP 1 and PTP 2 ports.

For best results, the PTP network should not have a high amount of non-PTP traffic (such as ST 2110 streams).  It is advisable to configure the network switches so that this traffic is not routed to the PTP ports.