Tektronix®

SPG700
Multiformat Reference Sync Generator

Release Notes

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Release notes

This document describes new features, improvements, and limitations of Firmware Version 3.2.1 and 3.3 for the SPG700 Multiformat Reference Sync Generator.

Fixed firmware limitations

The following limitations are fixed in this firmware version:

Management Information Base (MIB)

In software version 3.2, the MIB was not available in the web UI. The link gave a **404 Not Found** error.

In software version 3.2.1, the MIB can be downloaded from the web UI. To download, go to the **SNMP settings** submenu in the **System** tab.

Change in remote SCPI operation to avoid disabling front panel

In previous versions, any access to the SCPI remote port would disable the local front panel. With increased use of periodic polling systems such as Dataminer, this has prevented access to the SPG local menus and caused the display to flash. In version 3.3, the front panel will stay enabled during the SCPI remote port accesses. Be aware that the remote port may be changing the context of the menus so be careful when simultaneously operating from the remote and the local UI.

SNMP failure after SCPI access

In previous versions, high polling rates and multiple sessions on the SCPI interface could cause the SNMP to stop working. This is fixed in version 3.3. Also, the Dataminer system driver, which was stressing this function, has been optimized to improve the overall performance.

GPI Trigger Delay on Loss of lock not working

Version 3.2 unintentionally disabled the ability to filter out short loss of lock or other similar events. In version 3.3, the alarm delay menu is working so minor events can be rejected and avoid unnecessary ECO changeovers.

General limitations

This firmware release has general limitations, which are outlined below. Please check the Tektronix Web site (www.tek.com/downloads) for any firmware updates to the SPG700 generator.

Firmware upgrades

- When the SPG700 Firmware is upgraded (using a USB drive or a network connection), all files created or installed by the user are deleted. The deleted files include presets, signal files, frame picture files, logo files, sequence files, and for Option SDI, can also include text and font files. The standard set of factory installed signal files, logo files, and Option SDI font files are restored when the firmware is upgraded.

  To prevent the loss of your user created files, use the **Backup all User Data to USB** function from the **SYSTEM** menu to save your user files before you upgrade the firmware. After the upgrade, use the **Restore all User Data From USB** function from the **SYSTEM** menu to restore your user created files.

- If you have loaded the SPG700 memory with a large number of test signals or frame picture files, you may not be able to upgrade the instrument firmware because the memory is too full. If you receive a memory error while attempting to upgrade the firmware, you need to delete some of the test signal or frame picture files and then perform the upgrade.

  Clear the cache on the browser after an update to the Instrument code. This is necessary to get the new features on the Web UI.

Network configuration using Manual mode

A network connectivity problem may occur when using Manual mode to configure the instrument IP address or subnet mask settings and the instrument is communicating across network boundaries. The problem does not occur when using DHCP mode to configure the network settings.

If your instrument is configured for Manual mode, use the following steps to work around this problem:

1. Configure the instrument IP address or subnet mask settings using Manual mode.

2. After configuring the IP address or subnet mask, perform one of the following:

   - Change the network gateway address to a valid value.

   - If the network gateway address is already correct, toggle the gateway address. For example, change the gateway address to some other (incorrect) address, apply the change, and then change the gateway address back to the correct value.

Alert messages

If there is an active alert condition (e.g. reference input missing) while the **STATUS : ALERT** menu is displayed, the alert message(s) will not automatically change if the alert condition is cleared. To view any changes to the alert messages, you must change to another menu and then return to the **STATUS : ALERT** menu.

Fan Fault and Loss of diagnostics

Under rare circumstances, a false fan alert is reported and the diagnostic reporting is compromised. The fan is still spinning, but the system reports a hardware fault, the system beeps, and any menu operation that displays information from the diagnostics is slow. Normal operation of the critical functions is still maintained. The only way to recover is to power cycle the instrument, but it is OK to wait for a non-critical time to do the power cycle. These false fan alarms tend to happen more when the web remote is heavily utilized.

Resetting an output signal

A signal output interruption or synchronization shock may occur when the instrument rereads or resets signal data, such as format changing, preset recall, or signal-button assignment.

Incorrect CW reference signal

If an NTSC or PAL signal is connected to the **REF** input when the reference source is set to **CW**, the video timing of all SPG700 outputs will rattle every 1–2 seconds. To resolve this problem, use the **REFERENCE : SOURCE** menu to select the signal type that matches the reference input signal.

Web UI / Remote control

Some performance issues have been observed when the SPG700 Web Interface is used with Internet Explorer 8. The use of newer browsers is recommended.

Clear the cache on the browser after an update to the Instrument code. This is necessary to get the new features on the Web UI.

In some instances, the Web UI will not recover well from a power cycle on the instrument. If this occurs, close the Web UI windows, cycle the power on the SPG, then clear the cache before re-starting the Web UI.

Time of day changes for timecode outputs

When the time of day changes, such as when scheduled daylight savings adjustments are made or when the internal time is set from the front panel, there can be a delay before that change is reflected on timecode outputs.

This delay may be a small number of frames (fraction of a second) when all timecode output formats are based on the same clock rate (for example, NTSC black burst and 1080i 59.94 HD tri-level on black outputs in addition to 30 fps drop-frame on LTC outputs), or up to several seconds when timecode formats based on different clock rates are used (for example, 29.97 fps and 24 fps on different outputs).

Daylight Savings Time (DST) scheduler system

The DST scheduler system applies the DST offset even if the Time of Day (TOD) source is set to **VITC Input** or **LTC Input** and the SMPTE309 mode is set to **Ignore** or **Use as Input**. In these cases, the offset is applied whether or not a valid **VITC** or **LTC Input** signal is available. For proper DST scheduling, you need to ensure that the instrument has valid time information and manually enter the correct time of day if the system is not synchronized to an accurate time of day source.

The manual Time of Day setting is not automatically reapplied when the instrument power is cycled. If the instrument powers up in with the Time of Day source set to **Internal** mode, the time of day will be acquired from the internal real-time clock in the instrument. Check the system time of day and adjust as needed to ensure that it is correct before the next transition of the DST scheduler when the Time of Day source is set to **Internal** mode.

Option SDI

SDI equalizer test signal. Per SMPTE RP198 for HD-SDI, a polarity change word is used to ensure equal probabilities of the DC bias for the equalizer test pattern. However, some SDI formats still exhibit an unequal bias. Enabling a dynamic bit stream in the output signal, such as embedded audio or timecode data, will result in both DC levels appearing in the output signal.

Test signal files. The Option SDI signals use file-based test signal definitions. If you modify a signal file from the factory version, unpredictable results may occur. To recover from this situation, reload the factory version of the signal file from the Tektronix Web site (www.tek.com/downloads).

Multi-language support. Languages that require combined glyphs in order to be represented may not be correctly rendered in the Text ID display on SDI signals.

Multiburst signal motion. Do not set a Multiburst signal in motion on SDI signals. Otherwise, a corrupted signal will be generated.

Overlay and zone plate circles not round. For SD 525 and 625 signal formats, the overlay and zone plate circles are not perfectly round.

Bitmap files for logo overlays. When you create bitmap files for logo overlays, filter the sharp edges within the logo image before you download the bitmap file to the instrument. The SPG700 applies a filter to the left and right edges of the bitmap image to reduce high-frequency ringing on the signal waveform. However, this filter is not applied within the span of the image.