TG700
TV Signal Generator Platform

Release Notes

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Release Notes

This document describes new features, improvements, and limitations of firmware version 5.1 for the TG700 TV Signal Generator Platform.

New Features

This release adds support for the new GPS7 module and enhancements to some existing modules.

GPS7 Module

This release adds support for the new GPS7 module. This module has the following features:

- Integrated GPS receiver that can serve as the system timing reference
- Three analog black video outputs for NTSC, PAL, or trilevel HD sync signals
- Timecode output available as VITC on the black outputs and from four independent LTC outputs
- Timecode reference to the time-of-day from the GPS receiver, the internal source, or to a program time counter for elapsed-time timecode
- Simple Network Time Protocol (SNTP version 3.0) Server functionality to respond to time requests over the Ethernet interface
- Ability to schedule GPS clock changes for Daylight Savings Time (DST) and for leap seconds
- Ability to configure how the instrument responds when there is a loss of lock to the GPS signal, and how the instrument responds when the signal is recovered
- 3.3 V or 5 V DC power output available for an external GPS antenna
- General Purpose Interface (GPI) with one control input and two alarm outputs

BG7 Module

This release adds a timecode generator with VITC to the BG7 module. This feature is only available when a GPS7 module is installed in the same mainframe and for BG7 module hardware of version 1.2 or greater.

HDVG7 Module

This release adds a timecode generator with ATC-LTC to the HDVG7 module. This feature is only available when a GPS7 module is installed in the same mainframe and for HDVG7 module hardware of version 2.0 or greater.

General Limitations

This release has the following general limitations.

TG700 Mainframe Requirements for this Release

Firmware release version 5.1 must be installed on a TG700 mainframe with at least 32 MB of memory. A 16 MB system can be upgraded to 64 MB by ordering the FP (Frame Picture) upgrade kit.

TG7 Setup Software

In setting signal formats for the Black 2 and Black 3 outputs of the AGL7 module, do not select Black 2 = HD sync (same as Black 3) and Black 3 = BB (same as Black 2) simultaneously, while Frame Reset 1 is set to 2.997 Hz. This operation makes the Frame Reset 1 unstable. If this is the case, reset the system by recalling the Power On Default setting or a preset.

TG7 Comm Software

Do not change or delete any file names or folder names other than those downloaded by users (signal files, sequence files, and preset files). Doing so can cause the instrument to operate in an unexpected manner.

You can change the names of user files (signal files, sequence files, and preset files) after you have downloaded them into the TG700 mainframe. Remove and reapply power to see the updated names on the mainframe.

Resetting an Output Signal

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

Setting the Genlock Source

If you change the frame reset period in the AGL7 module after the genlock source is set to CW, the frame reset may not be selected properly. If this is the case, set the frame reset to CW.

Assigning a Signal and Frame Picture to a Front-Panel Button

When you assign a downloaded signal to a front-panel button, do not assign different format signals to the same button.

Do not assign a signal set to a signal button of the signal that is currently being out put. Also, do not assign a signal set to a signal button while the message “No Signal Set Assigned” is displayed. If you reassign a signal set to the OTHER button, perform the reassignment while a signal that is assigned to a button other than the OTHER button is out put.

Embedded Audio of the HDVG7 Module

Embedded audio for 720 23.98p/24p formats are not supported for the HDVG7 module, even though they can be selected in the menus.

Y to GBR Convertor Mode of the HDLG7 Module

If the output format is 2K and the Converter mode is set to Y to GBR, changing operating mode by selecting a test signal will cause an unexpected black and white signal to be generated. To correct the test signal, press the OTHER button until Normal is selected, and then press the test signal button.

25/29.97/30 Hz Segmented Frame Format for the HDLG7 Module

The HDLG7 module does not have format selections for 1080PsF at 25 Hz, 29.97 Hz, or 30 Hz. These formats are almost identical to 1080i (interlaced) formats at 50 Hz, 59.94 Hz, and 60 Hz respectively; these format settings can be used with progressive segmented signals. However, note that the SMPTE 352M payload identifier for the output signal will show an interlaced signal format, even when the HDLG7 module is converting a single link progressive segmented input signal to dual link.

Multiple Timecode Formats

Frequent changes to some output formats can result in instability on certain outputs. To remove any output instability, save the desired output settings to a preset and then reload that preset.

The following outputs are affected: output formats for the black and LTC outputs of the GPS7 module, the black outputs of the BG7 module, and the HD-SDI output of the HDVG7 module. This instability can happen when several different formats are used simultaneously within one instrument, such as those derived from 29.97 Hz, 25 Hz, and 24 Hz clocks.

NOTE. *You can also reduce instability, and prevent any disturbance to all PAL signals, by setting any output to PAL in the power on preset, and keeping any output at PAL at all times. Similarly, if one NTSC and one 23.98 rate output are set at power up and preserved, then that will prevent any disturbance to all NTSC signals.*

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 trilevel 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).