

R&S®DVSG

Digital Video Signal Generator

Release Notes

Firmware Version 02.00

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81671 Munich, Germany

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The following abbreviations are used throughout this document:

R&S®DVSG is abbreviated as R&S DVSG.

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1 Information on the Current Version and History

1.1 Version 02.00

2010-06-01 / Manual E06.00

New Functionality

- AV Signal Generator (R&S DVSG-K10)
 - Vertical pixel shift: 0 to 63 lines/frame.
 - New HDMI 1.4a 3D video format supported:
 - 1280x720p 50Hz/ 59.94Hz/60Hz frame packing, side-by-side (half), top-and-bottom
 - 1920x1080p 23.97Hz/24Hz frame packing, side-by-side (half), top-and-bottom
 - 1920x1080p 29.97Hz/30Hz frame packing, top-and-bottom
 - New video format support:
 - 1920x1080p@25Hz, video ID: 31
 - 1920x1080p@29,97/30Hz, video ID: 32
 - 1280x720p@100Hz, video ID: 41
 - 1280x720p@119,99/120Hz, video ID: 47
 - YCbCr 4:4:4 format supported.

Modified Functionality

- AV Signal Generator (R&S DVSG-K10):
 - New version of R&S AVG Pattern Import software (version 2.0) with additional support of 3D and YCbCr 4:4:4 video format.
 - "Pause" functionality: Enables still picture (stops the sequence and shows the last frame) and supports the frame select using the rotary knob.
 - Fast signal loading supported by new version of PIF FPGA (version 01.02.07).
- AV Signal Generator (R&S DVSG-K10) / AV Signal Player (R&S DVSG-B30):
 - HDMI interface supports SPD info frames.

Fixed Issues

- AV Signal Player (R&S DVSG-B30): Bug fix for audio decoding by special transport streams after using "Pause" functionality.

- AV Signal Player (R&S DVSG-B30) / TS Player / Recorder (R&S DVSG-K20): Bug fix for decoding error by playing TRP streams (seamless mode) (PR3465).
- TS Player / Recorder (R&S DVSG-K20):
 - Bug fix for "PCR Error" and "Continuity Error" by starting GTS streams (PR2836).
 - Bug fix for ASI rear output: In ASI continuous mode, the "TS Serial Output" works accurately only up to 170 bit/s.

Known Issues

- AVGEN: Synchronization between video and audio lost by using "Pause" functionality (PR3388).
- TOS audio output not yet supported.
- HDMI-compliant pending.
- AVP files contain no audio.

1.2 Version 01.34

2009-12-03 / Manual E05.00

New Functionality

- AV Signal Generator (R&S DVSG-K10): The R&S AVG Pattern Import software provides the means to quickly convert bitmap files into the AVG format.
- AV Signal Generator (R&S DVSG-K10) / AV Signal Player (R&S DVSG-B30):
 - Interface settings for RGB component signals sync adjust supported (CR3204, CR3113)
 - Display of VGA EDID supported.
- AV Signal Player (R&S DVSG-B30): ATSC/DVB configuration selector for transport streams (TRP) (CR3203)
- TS Player / Recorder (R&S DVSG-K20):
 - Support of optional stream library: CMMB Streams (R&S SFU-K225), ATSC-M/H Streams (R&S SFU-K226) (CR3801)
 - SMPTE 310 recording supported.
 - Interface settings: Nullpacket adjust supported (CR3135), Parallel SPI Output: DVALID adjust supported (CR3109)

Modified Functionality

- Fan control: Reduce fan noise (CR2859)
- AV Signal Generator (R&S DVSG-K10): Pause : Enables still picture - stops the sequence and shows the last frame.

- AV Signal Player (R&S DVSG-B30): Decoding process can be deactivated when in TS player mode (CR3202)
- TS Player / Recorder (R&S DVSG-K20): Loading new GTS file changes the data rate to the minimum.

Fixed Issues

- AV Signal Player (R&S DVSG-B30): New version of decoder firmware improves the SDTV signal quality (CR2842)
- TS Player / Recorder (R&S DVSG-K20): Bug fix for PCR jitter in ASI continuous mode. (PR3183)

Known Issues

- TOS Audio output not yet supported.
- HDMI-compliance pending.
- AVP files contain no audio.
- ASI rear output: In ASI continuous mode, the "TS Serial Output" works accurately only up to 170 bit/s. For TS data rates > 170 bit/s, change into "Packet Mode".

1.3 Version 01.32

2009-06-24 / Manual E04.00

New Functionality

- AV Signal Generator (R&S DVSG-K10):
 - Multi-channel audio generator, file based playout supported.
 - Interface settings: level adjust supported
 - VGA is supported for R&S DVSG with serial number 100522 and higher. For modifications of instruments with a lower serial number, please contact service.
 - Deep color supported.
- AV Signal Generator (R&S DVSG-K10) / AV Signal Player (R&S DVSG-B30):
 - HDCP supported.
 - Display of EDID supported.
- TS Player / Recorder (R&S DVSG-K20):
 - SMPTE 310 playout supported.
 - R&S SFU-K222 MediaFlo streams / R&S SFU-K224 ISDB-T streams supported.

Modified Functionality

- AV Signal Generator (R&S DVSG-K10): Test streams > 1 Gbyte only supported for R&S DVSG with serial number 100503 and higher. For modifications of instruments with a lower serial number, please contact service.

Fixed Issues

- AV Signal Generator (R&S DVSG-K10) / AV Signal Player (R&S DVSG-B30): Bug fix for malfunctioning analog video outputs: Fix NTSC subcarrier frequency.

Known Issues

- TOS audio output not yet supported.
- HDMI-compliant pending.
- AVP files contain no audio.
- SMPTE 310 record not yet supported.

1.4 Version 01.30

2009-01-26 / Manual E03.00

New Functionality

- SCART output configurable.
- AV Signal Player (R&S DVSG-B30):
 - Supports stereo audio.
 - Supports resolution conversion.
- AV Signal Generator (R&S DVSG-K10) supported.
- SDI/HD-SDI Output (R&S DVSG-K30): Embedded audio is supported for R&S DVSG with serial number 100512 and higher.

Modified Functionality

- TS Player and Recorder (R&S DVSG-K20) supports up to 10 ms jitter offset.

Known Issues

- TOS audio output not yet supported.
- HDMI-compliant pending.
- Interface settings: Level adjustment not yet supported.
- HDCP not yet supported.
- AVP files contain no audio.

- SMPTE 310 not yet supported.
- AV Signal Generator (R&S DVSG-K10): Audio not yet supported.

1.5 Version 01.22

2008-07-01 / Manual E02.00

New Functionality

- AV Signal Player (R&S DVSG-B30) supported.
- TS Player and Recorder (R&S DVSG-K20) supported.

Known Issues

- TOS audio output not yet supported.
- HDMI-compliant pending: Audio not yet supported.
- Interface settings: Level adjustment, upscaling and downscaling not yet supported.

2 Modifications to the Documentation

<None>

3 Firmware Update

Your R&S DVSG is delivered with the latest firmware version available. Firmware updates are provided by Rohde & Schwarz service centers or sales offices.

3.1 Update Information

The firmware update consists of one file. The version numbers in the file names vary with each update:

- Firmware: DVSG_01.00.00.00(Release).msi

You can install the new firmware version by using either the USB or the LAN interface:

- For an update using the USB interface, store the downloaded update files on a memory stick. You need a mouse and optional an external keyboard to get access to the Windows XP operational system.
- For an update using the LAN interface, store the downloaded update files on a network directory.

For information on how to connect the R&S DVSG to a network and how to access R&S DVSG drives, see the quick start guide, section 1.5.

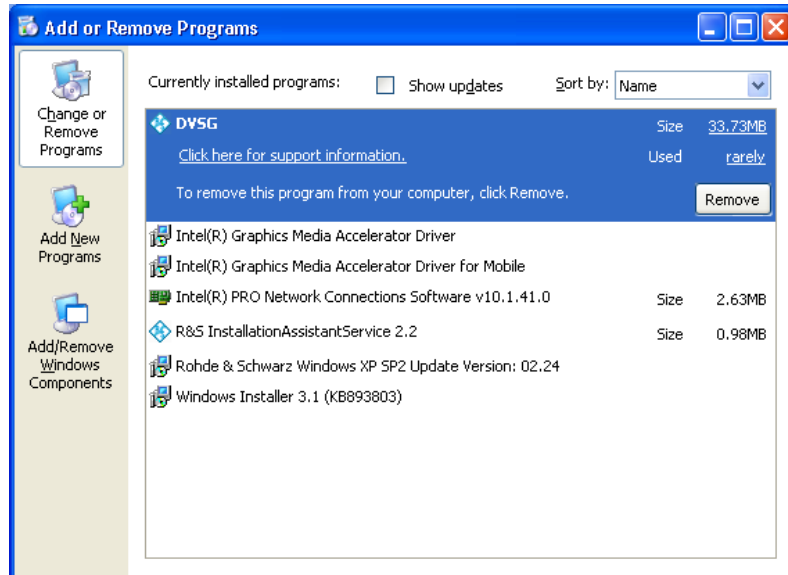
After a successfully installation of the new firmware we recommend to make a backup of the system drive. This gives you a fall-back solution if the systems shows any problems in future. For details see quick start guide, section 1.6.

3.2 Updating the Firmware

1. Switch off instrument.
2. Connect mouse and/or external keyboard to the USB interface.
3. Switch on instrument.
4. Wait until the R&S DVSG firmware has booted and the application has started.
5. Access Windows XP Embedded desktop.
 - Operation with mouse: Click the "Close" button of the R&S DVSG application.
 - Operation with keyboard: Press ALT+F4 to close the application.

The Windows XP Embedded desktop is displayed.

6. Deinstall old firmware version.
 - In the Windows "Start" menu, select "Control Panel", "Add or Remove Programs".



7. Copy update files.
 - a. Open folder with update files using the Windows Explorer.
 - b. Delete all files in *D:\DVSG\Installations*.
 - c. Copy update files to *D:\ DVSG \Installations*.
 - d. Change to *D:\DVSG\Installations*.
8. Install new firmware version.

Execute DVSG_01.00.00.00(Release).msi.



- e. After the installation, click the "Finish" button.

9. Reboot the R&S DVSG.
After reboot, the R&S DVSG firmware will be started.
10. Wait until R&S DVSG firmware is operational.

3.3 Installing Software Options

1. Press the SETUP key on the instrument front panel and select "Software Options". For further information refer to the operating manual, chapter 4, or the online help. You can access the online help by pressing the HELP key on the instrument or the F1 key on the external keyboard.
2. After successful installation, restart the instrument.

3.4 Installing Preinstalled Software

The Data Management Software CS-S10w provided by Konica Minolta Sensing Inc. is preinstalled on your R&S DVSG. This software offers various data management, analysis and evaluation functions which are useful for R&D and quality control. For details and documentation refer to

<http://www.konicaminolta.com/instruments/download/software/cs-s10w/index.html>

- ▶ To install the software on your R&S DVSG, double-click the following icon on the desktop:



4 Open Source Acknowledgement

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BOOST Library	http://www.boost.org	Boost Software, v.1
zlib	http://www.zlib.net	zlib, v.1.2.3
Xalan Xerces	http://xalan.apache.org/ http://xerces.apache.org/	Apache, Ver.2
ONC/RPC	http://www.plt.rwth-aachen.de	SUN
VNC	http://www.realvnc.com/	GPL V3

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com) and software written by Tim Hudson (tjh@cryptsoft.com).

Rohde & Schwarz would like to thank the open source community for their valuable contribution to embedded computing. The source code of the open source packages is available on request.

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Version 1.0 - August 17th, 2003

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version 1.2.3, July 18th, 2005
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