

# Keysight 5000A & 6000A Series Oscilloscopes

## (Latest) Version Information

|                                     |                    |
|-------------------------------------|--------------------|
| <b>Released Date:</b>               | 27 June 2015       |
| <b>Instrument software version:</b> | Revision 6.20.0000 |
| <b>File Name:</b>                   | sys6000.jzp        |

Version 06.20.0000 of the oscilloscope software includes the items below. Note that version 06.16 of the lpk6000.jzp file, version 02.19 of the gsp6000.jzp file, and version 02.25 of the lib6000.jzp must be used with this version of the sys6000 file.

## Enhancements

This software revision includes the following new enhancements:

- Updated to support Java 8 Update 20 and later

## (Earlier) Version Information

### Oscilloscope Software Version 06.18.0000

**Release Date:** June 13, 2012

**File Name:** sys6000.jzp

Version 06.18.0001 of the oscilloscope software includes the items below. Note that version 06.16 of the lpk6000.jzp file, version 02.19 of the gsp6000.jzp file, and version 02.25 of the lib6000.jzp must be used with this version of the sys6000 file.

#### Defects Addressed

- Minor remote language improvement.

### Oscilloscope Software Version 06.17.0001

**Release Date:** Dec 22, 2011

**File Name:** sys6000.jzp

Version 06.17.0001 of the oscilloscope software includes the items below. Note that version 06.16 of the lpk6000.jzp file, version 02.19 of the gsp6000.jzp file, and version 02.25 of the lib6000.jzp must be used with this version of the sys6000 file.

#### Defects Addressed

- Error corrected in which the X@Max and X@Min measurement readings were swapped on DSO6014/6012 scopes.

### Oscilloscope Software Version 06.16.0001

**Release Date:** May 15, 2011

**File Name:** sys6000.jzp

Version 06.16.0001 of the oscilloscope software includes the items below. Note that version 06.16 of the lpk6000.jzp file, version 02.19 of the gsp6000.jzp file, and version 02.25 of the lib6000.jzp must be used with this version of the sys6000 file.

## Enhancements

- Support for the Agilent N2744A T2A adapter that enables use of the following Tektronix probes
  1. P5205
  2. P5210
  3. P6701
  4. P6703
  5. P6711
  6. P6713

## Oscilloscope Language (Help System) Version 06.16

Release Date: May 15, 2011

File Name: lpk6000.jzp

Language version 06.16 is required to support oscilloscope software version 06.16.0001.

## Oscilloscope Graphics Version 02.19

Release Date: April 7, 2011

File Name: gsp6000.jzp

Graphics version 02.19 works with software version 06.15.0001 and corrects an issue with SPI framing by timeout.

## Oscilloscope Software Version 06.15.0001

Release Date: Oct. 15, 2010

File Name: sys6000A.jzp

Version 06.15.0001 of the oscilloscope software includes the items below. Note that version 06.15 of the lpk6000A.jzp file, version 02.17 of the gsp6000A.jzp file, and version 02.25 of the lib6000A.jzp must be used with this version of the sys6000A file.

## Enhancements

- Support for the Agilent N2744A T2A adapter that enables engineers to connect Tektronix TekProbe-BNC Level 2 probes to Agilent's Infiniium and InfiniiVision oscilloscopes.
- Support for the Agilent N2795A 1-GHz and N2796A 2-GHz single-ended active probes featuring 1-Mohm input impedance and 1-pF input capacitance for low signal loading. The probes' built-in headlight helps engineers view small components on their circuits under test. These probes are directly powered by the oscilloscope's AutoProbe interface and require no external power supply.
- Support for the Agilent N2893A; a 100-MHz, 15-A AC/DC current probe with AutoProbe interface for InfiniiVision and Infiniium oscilloscopes. The new current probe features auto degauss (demagnetization) and auto calibration to remove residual magnetism and unwanted DC offset in the probe.

#### Defects fixes

- Roll mode now goes down to 100 milliseconds per division.
- The automatic timeout for some longer menus has been increased.
- The de-gauss behavior is improved for the N2893A current probe.

#### **Oscilloscope Language (Help System) Version 06.15**

**Release Date:** Oct. 14, 2010

**File Name:** lpk6000A.jzp

Language version 06.15 is required to support oscilloscope software version 06.15.0000.

#### **Oscilloscope Software Version 06.10.0000**

**Release Date:** June 30, 2010

**File Name:** sys6000.jzp

Version 06.10.0000 of the oscilloscope software includes the items below. Note that version 06.10 of the lpk6000.jzp file, version 02.17 of the gsp6000.jzp file, and version 02.25 of the lib6000.jzp must be used with this version of the sys6000 file.

#### Enhancements

- Autoscale preference - A 'Fast Debug' preference was added to aid the quick checking of many test points for ground, DC power supplies, and clocks or other AC signals.
- Users can now specify a measurement to be made in the Zoom waveform window or the Main waveform window. This is found in the Utility -> Options -> Preferences menu.
- Users can now specify that Average and RMS measurements should be made over N-Cycles of the signal, or use the full screen, or to have the instrument automatically choose. This is controlled via the 'Settings' softkey control in the 'Meas' menu.
- When the Entry Knob is slaved to holdoff, pushing the Entry Knob will set the holdoff to its minimum value.
- SPI Triggering and Decode setup and hold time have been changed to allow improved performance for faster systems.
- Now supports both CAN H-L and CAN L-H differential signal polarities.
- When in segmented mode, the time and date of the first segment's trigger is saved and displayed.
- Remote command :TRIGger:LFIFty has been added. This does the same action as pushing the trigger level knob on the 6000B, which is to set the trigger level to 50% of the trigger channel, if on screen. It applies to both the 6000 and 5000 series.

#### Defects fixes

- A SPI decoder error that results in double counting of some bits has been corrected.
- Instrument's Remote Front Panel functions much better with 3<sup>rd</sup> party applications using ZRLE encoding.
- Manually entered probe factors are now saved to setups and recalled with setups.
- Remote command, :ACQ:POINTs?, works better.
- Remote command, \*TER?, now works more robustly.
- More robust identification of N2790A probes. This should prevent occasional mis-identification of the probe during attachment.

#### **Oscilloscope Language (Help System) Version 06.10**

**Release Date:** June 30, 2010

**File Name:** lpk6000.jzp

Language version 06.10 is required to support oscilloscope software version 06.10.0000.

#### **Oscilloscope Library Version 02.25**

**Release Date:** June 30, 2010

**File Name:** lib6000.jzp

Library version 02.25 is required to support new features in oscilloscope software version 06.10.0000.

### Oscilloscope Graphics Version 02.17

Release Date: June 30, 2010

File Name: gsp6000.jzp

Graphics version 02.17 is required to support new features in oscilloscope software version 06.10.0000.

### Oscilloscope Software Version 06.00.0004

Release Date: Mar. 9, 2010

File Name: sys6000.jzp

Version 06.00.0004 of the oscilloscope software includes the items below. Note that version 06.03 of the lpk6000.jzp file, version 02.12 of the gsp6000.jzp file, and version 02.24 of the lib6000.jzp must be used with this version of the sys6000 file.

#### Defects fixes

- For MSO/DSO6000 series scopes, Precision Mode for measurements and math waveforms now works with units with ROM6000 Revision Rev2.00 and older (smaller revision numbers)
- Saving CSV files while STOPPED in average mode now store correctly.

### Oscilloscope Software Version 06.00.0002

Release Date: Mar. 2, 2010

File Name: sys6000.jzp

Version 06.00.0002 of the oscilloscope software includes the items below. Note that version 06.00 of the lpk6000.jzp file, version 02.12 of the gsp6000.jzp file, and version 02.24 of the lib6000.jzp must be used with this version of the sys6000 file.

### New Features

Option FLX – Integrated FlexRay serial decode, triggering, and compliance option.

Option 553 – Integrated Mil-STD-1553 serial decode and triggering option.

New Precision Mode for measurements and math waveforms. When in this mode, the oscilloscope will extend the memory depth for these functions to 10K samples, increasing the precision of the measurements and resolution of the Math waveforms, including FFT's with up to 10K resolution.

Web & VNC LAN Addressing improvements

- Now requires Java 1.6 update 13

Improved Web-based front panel

- Added direct input control alternative for knob variable adjustment
- Optimized pull down menu arrangement

Network passwords can now be both upper and lower case

Softkeys that use the entry knob are now color coded to Entry knob LED color.

When adjusting the lister row, the Lister Time column can now be referenced to the previous row in addition to the trigger position.

Can now save, or transfer > 1000 points on digital channels when analog channels are not on.

SPI decode readout now supports big endian/little endian specification.

SPI Decode performance is improved:

- Decreased the minimum time between SPI frames.
- Decreased the hold time from the last clock in the frame to chip-select false.

A number of new print factors for several serial trigger standards are now included.

### Defects fixes

- Query of the lister when there is no data now works as expected.

- Saving CSV files to USB now works better at slow sweep speeds (100ms/div and slower)
- Saving CSV files to USB now works better at with large Average counts (>128))
- Saving CSV files now includes all data, including the last point
- ACQUIRE:SRATE now returns the correct values
- Now able to connect to LAN on a DHCP enabled network when USB control is not enabled
- Segmented Time Tags are improved for large time (10's of seconds) between segments
- Auto-increment of file name is improved when using USB thumb drives

### Oscilloscope Library Version 02.24

Release Date: Feb 15, 2010

File Name: gsp6000.jzp

Library version 02.24 is required to support new features in oscilloscope software version 06.00.

### Oscilloscope Graphics Version 02.12

Release Date: Feb 15, 2010

File Name: gsp6000.jzp

Graphics version 02.12 is required to support new features in oscilloscope software version 06.00.

### Oscilloscope Language (Help System) Version 06.00

Release Date: Feb 15, 2010

File Name: lpk6000.jzp

Language version 06.00 is required to support oscilloscope software version 06.00.

### Oscilloscope Software Version 05.26

Release Date: September 7, 2009

File Name: sys6000.jzp

Version 05.26 of the oscilloscope software includes the items below. Note that version 05.25 of the lpk file and version 02.03 of the gsp file must be used with this version of the sys file.

New Features



Option E00 and Option MST (N5466A) are now standard. Enabled are:

- Serial Lister.
- Measurement statistics.
- Waveform tracking cursors.
- Sequence, Nth Edge Burst, and USB triggering on the 5000 Series.

Time remaining on a trial license is now reported in the **[Utility]>Options>Licenses>Show license information** screen.

## Oscilloscope Software Version 05.25

**Release Date: June 3, 2009**

**File Name: sys6000.jzp**

Version 05.25 of the oscilloscope software includes the items below. Note that version 05.25 of the lpk file and version 02.03 of the gsp file must be used with this version of the sys file.

### New Features

Serial Lister. Standard on new oscilloscopes. Purchase license E00 (N5466A) for existing oscilloscopes. Also requires one of the separately purchasable serial decode products.

I2S Serial Decode and Triggering. Requires license SND. Purchase option SND when ordering new oscilloscopes, or N5468A for existing oscilloscopes. Only compatible with 4 and 4+16 channel models.

Sequence, Nth Edge Burst, and USB Triggering on the 5000 series. Standard on new oscilloscopes. Purchase license E00 (N5466A) for existing oscilloscopes.

FlexRay Eye Diagram Mask Testing (TP1 and TP4). Standard on new oscilloscopes with option FR2 (or N5432B). Purchase license E00 (N5466A) for existing oscilloscopes with option FRS (or N5432A). Also requires the Mask Testing option (N5455A, or LMT) on existing oscilloscopes. Mask Test option (option LMS or N5455A) included on new oscilloscopes when ordered with option FR2.

FlexRay Event Triggering. Standard on new oscilloscopes. Purchase license E00 (N5466A) for existing oscilloscopes. Also requires the FlexRay decode and trigger option (N5432B, FR2, or predecessors).

FlexRay decode and triggering option FR2 (or N5432B) replaces option FRS (or N5432A). The replacement FlexRay option FR2 (or N5432B) includes Mask Testing (option LMT or N5455A) and Segmented Memory (option SGM or N5454A) as standard.

#### Defect Fixes

CAN data triggering can now be specified in binary.

LIN data triggering can now be specified in hex or binary.

FlexRay setup now supports the FIBEX 3.0 file format.

Display can now be frozen (Freeze Display) without stopping running acquisitions.

Mask Testing can now be configured such that measurements are only made when a mask violation is detected.

Counter measurement will now display eight digits of resolution when English is the selected user interface language. For other languages, more digits will be displayed than in the previous release, but not the full eight.

TV Trigger now supports 1080p/50 and 1080p/60.

Labels saved with invert on will now be readable.

Korean rise time translation has been corrected.

#### **Oscilloscope Graphics Version 02.03**

**Release Date:** June 10, 2009

**File Name:** gsp6000.jzp

Graphics version 02.03 is required to support new features in oscilloscope software version 05.25.

#### **Oscilloscope Language (Help System) Version 05.25**

**Release Date:** June 5, 2009

**File Name:** lpk6000.jzp

Language version 05.25 is required to support oscilloscope software version 05.25.

## Oscilloscope Software Version 05.20

**Release Date:** November 20 2008

**File Name:** sys6000.jzp

Version 05.20 of the oscilloscope software includes the items below. Note that version 05.20 of the lpk file must be used with this version of the sys file.

### New Features

Mask Testing (Limit) option. Requires license LMT. Purchase option LMT when ordering new oscilloscopes, or N5455A for existing oscilloscopes.

Measurement Statistics and Waveform Tracking Cursors option. Standard on new oscilloscopes. Purchase license MST (N5466A) for existing oscilloscopes.

### Defect Fixes

Saving all segments now possible.

Selection of continuous baud rates now possible for CAN, LIN, and RS-232.

RS-232 data trigger selection in ASCII now possible.

Label limitation of 6 characters increased to 10 characters.

Segmented acquisition progress now visible in multiple menus.

Coloring of marker and measurement readouts now matches channel colors.

:SAV:WAV <filename> no longer returns an illegal operation error if the front panel setup information box is checked.

Issue corrected when decoding I2C with segmented memory on.

XY mode combined with High Resolution mode no longer causes unexpected noise.

Corrected an FFT scaling issue.

Scope will now boot when both a USB drive and a printer are connected.

Corrected an issue where :MEAS:DEF DELAY,-1,-1 was incorrectly returning settings conflict error.

Pulse width trigger settings now recalled correctly on power up.

:WAV:SEGM:COUNT? Now returns the number of acquired segments.

Issue corrected when triggering on I2C Write-10.

### Oscilloscope Language (Help System) Version 5.2

**Release Date:** November 20, 2008

**File Name:** lpk6000.jzp

Language version 5.2 is required to support oscilloscope software version 05.20.

### Oscilloscope Library Version 2.10

**Release Date:** November 20, 2008

**File Name:** lib6000.jzp

Library version 2.10 is required to support oscilloscope software version 05.20.

### Oscilloscope Software Version 05.15

**Release Date:** July 18, 2008

**File Name:** sys6000.jzp

Version 05.15 of the oscilloscope software includes the items below. Note that version 05.15 of the lpk file must be used with this version of the sys file.

#### Additions

Graphical user interface localized for Simplified Chinese, Traditional Chinese, Japanese, and Korean.

Ability to use channel 3 and channel 4 when defining a math function, as well as the addition of a '+' operator. The same source can now be used as both operands of an arithmetic operation.

Addition of Blackman Harris FFT window selection.

Ability to selectively delete measurements from the screen.

Timestamp and Agilent logo on saved or printed bitmaps.

Enhancements to the ALB file format for additional integration with Agilent logic analyzer software.

Ability to lockout 50 ohm impedance selection using the remote interface.

Ratio measurement.

Landscape printing option.

Support for memory options on the 5000 series.

#### Modifications

Math graphical user interface changes to allow for the channel 3 and channel 4 and other new math features noted above.

Printing of setup information now supported on additional printers.

Corrected issue with autoincrement setting not being remembered.

### **Oscilloscope Help System Version 5.15**

**Release Date:** July 18, 2008

**File Name:** lpk6000.jzp

Version 5.15 of the oscilloscope built-in help software includes the items below. Note that version 05.15 of the sys file must be used with this version of the lpk6000.jzp file.

#### Additions

Localized text for Simplified Chinese, Traditional Chinese, Japanese, and Korean versions of the graphical user interface.

#### Modifications

Modifications to some portions of the help text for consistency with the localized graphical user interface.

### **Oscilloscope Software Version 05.11**

**Release Date:** April 22, 2008

**File Name:** sys6000.jzp

Version 05.11 of the oscilloscope software includes the following:

#### Modifications

Corrects an issue with saving ALB data when both digital channel groups are turned on.

### **Oscilloscope Software Version 05.10**

**Release Date:** April 3, 2008

**File Name:** sys6000.jzp

Version 05.10 of the oscilloscope software includes the following:

#### Additions

Segmented Memory option. Requires license SGM. Purchase option SGM when ordering new oscilloscopes, or N5454A for existing oscilloscopes.

Ability to set CAN ID in hex for triggering.

Quick Print option in the Save/Recall menu to allow the Quick Print or Print key to be used for saving files.

#### Modifications

Enhancements to the serial decode formatting – use of angle brackets to denote packets, idle line shown in blue, limiting text to area within a packet

AutoScale will now leave measurements on if they were on prior to the AutoScale button being pressed.

After saving an image with the Press to Save softkey, the Save/Recall menu will be shown, allowing for repeated saves with a single key press.

### Oscilloscope Library Version 2.00

Release Date: April 3, 2008

File Name: lib6000.jzp

Library version 2.00 is required to support oscilloscope software version 05.10.

### Oscilloscope Graphics Version 1.96

Release Date: January 22, 2008

File Name: gsp6000.jzp

Graphics version 1.96 is required to support new features in oscilloscope software version 05.10.

### Oscilloscope Help System Version 5.1

Release Date: April 2, 2008

File Name: lpk6000.jzp

Version 5.1 of the oscilloscope built-in help software includes the following:

#### Modification

Corrected line overrun errors in several messages.

### Oscilloscope Software Version 05.00

Release Date: January 15, 2008

File Name: sys6000.jzp

Version 05.00 of the oscilloscope software includes the following:

#### Additions

RS-232/UART serial decode option. Requires license 232. Purchase option 232 when ordering new oscilloscopes, or N5457A for existing oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel model.

Serial decode options on the 5000 series (CAN/LIN, I2C/SPI, RS-232/UART).

CAN/LIN: Order N5424A for existing oscilloscopes, or option AMS when ordering new oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel model.

I2C/SPI: Order N5423A for existing oscilloscopes, or option LSS when ordering new oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel model.

RS-232/UART: Order N5457A for existing oscilloscopes, or option 232 when ordering new oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel model.

Support for the following LIN baud rates: 10.4 kb/s, 115.2 kb/s, 625 kb/s

Hex bus triggering in pattern trigger mode (6000 series).

Support for saving data in ALB format, which can be read by Agilent logic analyzers.

### Modifications

Usability enhancements for the print and save/recall configuration menus. There is a clear difference between the Print and Save functions. Now print only refers to sending data to a printer. The Quick Print key on new instruments is now labeled Print. The Print key (or Quick Print key on older units) brings up the Print menu instead of initiating a Save to USB device. Save now refers to saving data including image files to a USB device or internal oscilloscope memory. See the updated user's guide at

[www.agilent.com/find/5000manual](http://www.agilent.com/find/5000manual) or [www.agilent.com/find/6000manual](http://www.agilent.com/find/6000manual) for details.

Usability enhancements for the Horizontal menu. The Main/Delayed key is now labeled Menu/Zoom on new instruments. Delayed sweep is now called zoom sweep. See the user's guide for details.

More consistent use of the entry knob for menu pop-ups.

Other miscellaneous minor GUI enhancements.

Corrected a problem with math AutoScaling.

Corrected a problem with saving FFT data.



### Oscilloscope Library Version 2.00

Release Date: January 15, 2008

File Name: lib6000.jzp

Library version 2.00 is required to support oscilloscope software version 05.00.

### Oscilloscope Graphics Version 1.95

Release Date: December 4, 2007

File Name: gsp6000.jzp

Graphics version 1.95 is required to support new features in oscilloscope software version 05.00.

### Oscilloscope Software Version 04.20

Release Date: September 12, 2007

File Name: sys6000.jzp

Version 04.20 of the oscilloscope software includes the following for 5000/6000 Series oscilloscopes:

#### Additions

Added LIBRARY as a valid parameter for the VERSION? query.

#### Modifications

Corrected a problem with the SETUP? query.

Fixed a problem with absolute measurement thresholds.

Improved resolution of channel offset, trigger level, markers and measurement thresholds.

Changed GPIB timing for better performance in a wider range of topographies.

### **Oscilloscope Help System Version 4.1**

**Release Date:** July 18, 2007

**File Name:** lpk6000.jzp

Version 4.1 of the oscilloscope built-in help software includes the following:

#### Modification

Corrected line overrun errors in three Japanese help messages.

### **Oscilloscope Software Version 04.10**

**Release Date:** May 10, 2007

**File Name:** sys6000.jzp

Version 04.10 of the oscilloscope software includes the following for 5000/6000 Series oscilloscopes:

#### Additions

Square root function.

Functions now have adjustable measurement thresholds.

FlexRay triggering and decode feature supported. Requires license FRS. Purchase option FRS when ordering new oscilloscopes, or N5432A for existing oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel MSO model.

Added the lib6000 file to enable run time loading of some instrument features.

#### Modifications

Updated the HP printer support library.

Updated instrument web server to latest release.

Fixed instrument response to \*OPC?.

Fixed problem with MEAS:DEF?.

Added help system version to About Oscilloscope screen.

Fixed response to WAV:DATA? when there is no data.

Removed Quick Reference button from SCPI applet, the link on the web page serves the correct guide for both 5000 and 6000 series instruments.

Improvements to VNC remote interface mouse response for some menu items.

Updates and corrections to the built-in Programmer's Quick Reference Guide.

Fixed an issue with AUT command in certain menus.

Improvements to usability of the Math menu.

Added the build number to the system version display.

Improved amplitude response in 21-24ns/div range

### **Oscilloscope Library Version 1.00**

**Release Date:** May 10, 2007

**File Name:** lib6000.jzp

Library version 1.00 is required to provide the VNC based web remote control feature.

### **Oscilloscope Graphics Version 1.91**

**Release Date:** May 10, 2007

**File Name:** gsp6000.jzp

Graphics version 1.91 is required to support new features in oscilloscope software version 04.10.

### Oscilloscope Help System 04.00

Release Date: May 10, 2007

File Name: lpk6000.jzp

Version 04.00 help system provides localized content to support software version 04.10.

### Oscilloscope Software Version 04.03

Release Date: March 16, 2007

File Name: sys6000.jzp

Version 04.03 of the oscilloscope software includes the following for 5000/6000 Series oscilloscopes:

#### Additions

Added support for 5000 Series oscilloscopes.

Enabled probe power for DS0501XA series.

#### Modifications

none.

### Oscilloscope Software Version 04.02

Release Date: February 14, 2007

File Name: sys6000.jzp

Version 04.02 of the oscilloscope software includes the following for 6000 Series oscilloscopes:

### Additions

Added SCPI to query localized help version.

### Modifications

Improvements to java VncViewer so menu and toolbars adjust according to instrument capability.

Added build number to software revision displays for easier identification.

Improved CSV file save time.

Fixed an issue with SCPI control of digital channel display.

Applied network stack patch to improve reliability and protect against denial of service attacks.

Changed the java version requirements to allow newer versions than 1.5.0.

## **Oscilloscope Software Version 04.01**

**Release Date: December 05, 2006**

**File Name: sys6000.jzp**

Version 04.01 of the oscilloscope software includes the following for 6000 Series oscilloscopes:

### Additions

Support for the 6XXXL Series low-profile oscilloscopes.

LXI class C compliance.

Ability to control the oscilloscope remotely using a web browser.

Ability to upload the instrument's screen image using a web browser.

Digital Bus display.

AutoScale option to preserve acquisition mode.

Added optional parameters to AUToscale command to allow custom AutoScale.

Support for Altera FPGA licensing. Requires license ALT. Purchase option ALT when ordering new oscilloscopes, or N5434A for existing oscilloscopes. Appropriate for all MSO oscilloscope models.

Signal type selection for CAN trigger and decode to allow CAN\_H signals.

Ability to select multiple control ports for remote control.

Added user selections for dynamic DNS and manual IP configuration.

LAN reset function.

Password protection on web pages that can change settings.

Support for the E2621A and E2622A Probe Adaptors for telecommunications interface.

Demo license support enabled for instrument options.

### Modifications

Changed default host name rule.

Improved the auto-positioning of digital channels when a bus is turned on and off.

Fixed problem with some network settings not being preserved at power on with SEC option installed.

Made web pages W3C compliant.

Improved user feedback for installing instrument software via web interface.

Repaired a remote connection close problem.

Changed remote interface to give errors when unlicensed features are used instead of just ignoring the commands.

Fixed a problem with measurement thresholds for TEDGE command.

Enabled deep data records in high resolution acquisition mode.

Enabled using D0..D15 as sources for CAN and LIN decode/trigger.

**Oscilloscope Graphics Version 1.89**

**Release Date: November 17, 2006**

**File Name:** gsp6000.jzp

Graphics version 1.89 is required to support new features in oscilloscope software version 04.01.

### **Oscilloscope Software Version 03.52**

**Release Date:** October 20, 2006

Version 03.52 of the oscilloscope software includes the following for 6000 Series oscilloscopes:

#### Additions

none

#### Modifications

Significant changes to flash ROM drivers to improve speed and reliability.

Fixed problem with closing VXI-11 connections.

Changed handling of USB hubs; they are not mounted to avoid connection problems.

### **Oscilloscope Software Version 03.51**

**Release Date:** June 30, 2006

**File Name:** sys6000.jzp

Version 03.51 of the oscilloscope software includes the following for 6000 Series oscilloscopes:

#### Additions

Added AMS (AutoMotive Serial trigger and decode) option (CAN and LIN decode). Requires license AMS. Purchase option AMS when ordering new oscilloscopes, or N5424A for existing oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel model.

Added SEC option (Secure Environment). Requires license SEC. Purchase option SEC when ordering new oscilloscopes, or N5427A for existing oscilloscopes.

Added 8-bit I<sup>2</sup>C address mode.

#### Modifications

Improved handling of USB drive errors.

Labels are not forced on in serial trigger modes.

Improved trigger level knob assignment for serial trigger modes.

Changed default host name algorithm.

Fixed print operation from remote interface so a print can be invoked directly after a DIGitize.

Corrected negative delay limits when only logic channels are on.

Changed rules for digital channel position so the channels won't obscure the decode display.

### **Oscilloscope Graphics Version 1.80**

**Release Date:** June 9, 2006

**File Name:** gsp6000.jzp

Graphics version 1.80 is required to support new features in oscilloscope software version 03.51.

### **Oscilloscope Software Version 03.02**

**Release Date:** April 27, 2006

**File Name:** sys6000.jzp

Version 03.02 of the oscilloscope software (also called system software) includes the following for Agilent 6000 Series oscilloscopes:

#### Modifications

Fixed ASCII data output format. This corrects a situation in which an extra null character was appended to each line.



ASCII data for remote programming: sends a comma instead of a new line as the data separator.

Improved internal calibration routines.

## Oscilloscope Software Version 03.00

**Release Date:** March 15, 2006

**File Name:** sys6000.jzp

Version 03.00 of the oscilloscope software (also called system software) includes the following for Agilent 6000 Series oscilloscopes:

### Additions

Deep Memory Output: Added the ability to store long records to a USB mass storage device. These records can be post-processed using other tools. For example, you can store waveform data to a USB mass storage device, and post-process the record using your spreadsheet application.

Added I2C and SPI Serial Decode capabilities. Requires license LSS. Purchase option LSS when ordering new oscilloscopes, or N5423A for existing oscilloscopes. Hardware requirement: oscilloscope must be a 4-channel model.

Added Nth Edge Burst trigger mode.

Extended I2C trigger capability to include the ability to trigger on I2C frames with two data packets (three-byte trigger).

Added another Sequence trigger mode (Stage -> Trigger -> Nth Edge 2 no re-find).

Added Standard Deviation (= ACRMS) measurement.

Added the ability to output screen graphics in the PNG (Portable Network Graphics) file format.

Added ASCII XY and Binary data output formats.

Added high-resolution acquisition mode.

### Modifications

Now four Measurements (for example Frequency, Overshoot, Peak-to-Peak, and Rise Time) can be displayed simultaneously. Previously, only three could be simultaneously displayed.

### Notes

The sys6000.jzp file contains the built-in help in English. As of March 15, 2006, the English built-in help is up-to-date.

As of March 15, 2006 the localized built-in help (help in Simplified Chinese, Japanese, French, German, and Russian) has not been updated for the Oscilloscope Software Version 3.00 release. Therefore, help topics for the new features will appear in English. Help topics for changed features will appear in the local language, but the changed topics are not updated.

### Known Issue

An issue has been identified in which the oscilloscope may fail to print to some LaserJet printers via the printer's USB port. The progress bar shows that the item printed, but no output appears from the printer. To alleviate this problem, use a USB to Parallel Port adapter (also called USB to Parallel cable, or USB to IEEE-1284 adapter) to connect the oscilloscope to the printer's parallel port.

## **Oscilloscope Graphics Version 1.30**

**Release Date: March 1, 2006**

**File Name: gsp6000.jzp**

Version 1.30 of the oscilloscope graphics software includes the following for 6000-Series oscilloscopes:

### Additions/Modifications

Graphics version 1.30 is required to support new features in system software version 03.00.

## Oscilloscope Software Version 02.02

Version 02.02 of the oscilloscope software includes the following for 6000-Series oscilloscopes:

### Additions

Support for the 100-MHz bandwidth oscilloscopes.

Added Help System to the instrument's Utilities web page to allow easy customer updates.

### Modifications

Many improvements to USB storage device support.

Fixed a problem in DHCP service.

Corrected problem with PRINT? and DISPLAY:DATA? remote queries.

Corrected routing when using manual and autoIp LAN configuration modes.

Corrected bandwidth and risetime remote queries.

Fixed a memory leak in the file system.

Improved reliability of the flash file system.

Increased the timeout in normal trigger mode to one second before flashing the “waiting for trigger” indicator.

Fixed several waveform scaling issues impacting remote operation and display.

Improved printer support for factors and job cancel.

Changed the channel offset step size for better performance at high sensitivities.

Corrected the handling of units for FFT.

Added support for ALternate slope selection via remote interface.

Added a message that is displayed when a setup is recalled that can't be fully applied due to probe or instrument differences.

Improved reporting of failed or questionable calcs via remote interface.

Improved handling of unicode characters in file system.

Changed default parser selection to LAN.

### **Oscilloscope Graphics Version 01.15**

Graphics software version 01.15 is required for 100-MHz instruments.

### **Oscilloscope Help System 02.00**

Version 02.00 help system provides localized content to support 100-MHz instruments. The built-in help is localized, providing help topics in Simplified Chinese, Japanese, French, German, and Russian.

### **Oscilloscope Software Version 01.30**

Version 01.30 of the oscilloscope software includes the following for 6000-Series oscilloscopes:

#### Additions

None.

#### Modifications

Changed setup file format to be compatible with 5462x and 5464x-Series oscilloscopes. Setup files can now be interchanged between series and are applied to the extent that the instruments are capable.

Corrected file system creation date.

Various improvements to license manager.

Fixed several potential lockup conditions.

Corrected computation of waveform points in waveform header remote queries and when saving waveform data to file.

Improved control of reference signal selection for remote operation, especially when using digitize command.

Corrected SCPI response for palette "none".

Made changes to delay limits to enable pan/zoom on entire waveform record at slow sweep speeds.

Fixed a possible error condition on phase measurements.

Corrected a timing error on digital channels.

Improved reliability of probe identification detection.

Improved autoscale operation.

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