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# ·ascent<sup>®</sup> 2010

## Ascent<sup>®</sup> 2010 Software Release Notes

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vb<sup>™</sup>, vb1000v<sup>™</sup>, vb1000<sup>™</sup>, vb2000<sup>™</sup>, vb3000<sup>™</sup>, vbX<sup>™</sup>, vb5<sup>™</sup>, vb6<sup>™</sup>, vb7<sup>™</sup>, vb8<sup>™</sup>, vbBalancer<sup>™</sup>, vbBalancer+<sup>™</sup>, 6Pack<sup>™</sup>, vbXManager<sup>™</sup>, vbRemote<sup>™</sup> and PROFLASH<sup>™</sup> are trademarks of Commtest Instruments Ltd.

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## General Notes

The 2010 release of Ascent software incorporates a number of enhancements that significantly improve performance.

This document encompasses the following products:

- Ascent (9.45.7)
- OnlineManager (9.45.7)
- AscentWatcher (9.45.7)
- Ascent OPC (9.45.7)
- vbX firmware (3.4.28)
- vbOnline firmware (5.87.17)

## Compatibility Issues

### Microsoft® Windows® 2000 Support

Microsoft Windows 2000 does not fully support the Ascent 2010 release. This legacy operating system is no longer supported by Commtest Instruments, and users of this software are advised to upgrade to Windows XP, Microsoft Vista, Windows Server 2003/2008 or Windows 7.

Windows 2000 users unable to upgrade their operating system should continue using Ascent 2009 (9.10.164).

### vbX Operating System Upgrade

vbX operating system version 3.5.6 is mandatory for all vbX portable instruments upgrading to the newest firmware release (other than Chinese-language models, for which operating system version 3.5.7 is mandatory). vb5™, vb6™, vb7™, vb8™, vbBalancer™ and vbBalancer+™ instruments will be automatically upgraded to operating system version 3.5.6 during the 3.4.28 firmware Proflash sequence.

A separate firmware upgrade file for Chinese-language instruments, including operating system 3.5.7, is available for download from the Commtest Instruments website.

[Operating system upgrade instructions](#) are available from the Commtest Instruments website.

### Before You Proceed

If you are upgrading to Ascent 2010 from a previous Ascent version, please take a moment to read the notes below about this new software release and your recommended upgrade approach.

### Back Up!

The structure of Ascent databases has been changed for the Ascent 2010 software release. A database upgrade is required before older databases can be opened in the new software. We recommend backing up your databases using your existing copy of Ascent before uninstalling your current Ascent software version and installing the new 2010 release.

We also recommended that you receive all data from your vbX instrument before proceeding, especially if you intend to upgrade your instrument firmware. Upgrading the instrument firmware will delete all folders and data stored in flash memory.

## New in Ascent 2010 Software (9.45.7)

The Ascent 2010 software is a 'feature release' with a number of new features in addition to performance and compatibility improvements. New Ascent features include OPC Importing to allow the recording, trending and alarming of OPC data; and Template Machines.

This document is intended as an overview only. To learn how to use any of the new software functions, please refer to the Help files within Ascent (available from the **Help** menu). Alternatively, download the latest *Ascent Software Reference Guide* from our website: <http://www.commtest.com>.

### Microsoft® Windows® 7 Compatibility

The Ascent software suite is now compatible with both the 32-bit and 64-bit versions of the Windows 7 operating system from Microsoft, in addition to Microsoft's older Windows XP, Vista, Server 2003 and Server 2008 operating systems.

### Internationalization

This language release of Ascent 2010 includes English, Chinese, Russian, Spanish and Hungarian software interfaces. Additional languages will be added in future as they become available. If you require a specific language please contact Commtest Instruments Ltd. Available languages are license controlled and vary by purchase region.

### OPC Import

Ascent's OPC Import function allows process parameters from OPC-compatible devices to be recorded in the Ascent database. For example, wind turbines or refrigeration units with internal RPM or temperature sensors and an OPC-compatible output value can be added to the OnlineManager software's schedule of measurements, alongside vibration measurements taken from a standard vbOnline device.

This ability allows Ascent to trend, alarm and trigger events using values from existing data sources, and customers to use any compatible measurement device, including those from manufacturers other than Commtest Instruments.

### Template Machines (Level 3 Software Only)

The Template Machines system allows an administrative user to create Machine Templates in the Ascent software; then deploy these Templates to any number of Child machines. This function is useful if your site includes many instances of common hardware components (such as drive motors, fans or turbines).

Once a Template has been created, it may be assigned to any Machine. This action turns the assigned Machine into a 'Child' of the Template. This ability greatly simplifies the setup and maintenance time required for larger site installations. Each master Template may also be altered, and any changes then propagated to all associated Child machines.

### Miscellaneous Updates

In addition to the previously discussed improvements, the following general changes have also been made in the Ascent 2010 software release.

### OPC import and export improvements

Together with the new OPC import functions, OPC export of Alarm Band values has been added. This feature allows spectrum overalls to be monitored when a Band Alarm covers the full frequency range of interest. Improvements to OPC RPM support have also been implemented, together with faster OPC polling speed.

### Bulk Proflash

Ascent is now able to Proflash many vbOnline devices simultaneously.

### Initial criteria validation

Initial criteria are now validated both before and after recordings have been taken. Previously criteria were validated only once, before recording.

### New waveform display

Long Time Waveform measurements from vbX instruments are now compiled and displayed as complete waveforms in the Ascent software rather than individual measurement blocks. The default view for Waveform measurements is now a split Waveform/FFT view.

### Faster alarm updating

The recalculation of alarm statuses for historical measurements is now optional. This ability significantly increases the speed of alarm updating when managing larger databases. If selected, only the latest measurement for each schedule entry is recalculated when an alarm has been edited (**Alarms>Apply Alarm Changes to Past Recordings**).

### Improved navigator sorting

Machines in the navigator list may now be sorted alphabetically by name, in addition to by alarm status and alphabetically by tree item (**Screen>Sort>Machine Name Alphabetically**).

### Parameter set editor layout improvements

The Parameter Sets Editor panel has been revised to improve usability when managing Template Machines. The panel now includes a filter selection box (applicable to Machine Templates only) and sortable columns.

### General usability and stability enhancements

Various software bugs and compatibility issues identified in previous releases of the Ascent software have been resolved.

## New in vbX Firmware (3.4.28)

The latest firmware release for Commtest's vbX instruments is a 'performance improvement and feature release' offering a number of new features in addition to numerous refinements to existing instrument functionality.

vbX (vb5™, vb6™, vb7™ and vb8™; vbBalancer™ and vbBalancer+™) instrument owners are encouraged to upgrade their instruments with this firmware to improve product stability and to access new features.

**NOTE:** vb5™, vb6™, vb7™, vb8™, vbBalancer™ and vbBalancer+™ instruments will be automatically upgraded to operating system version 3.5.6 during the Proflash sequence. [Operating system upgrade instructions](#) are available for download from the Commtest Instruments website.

**NOTE:** This firmware release removes the ability to print balance reports using PCL-enabled network printers. If you require this feature, do not upgrade your current firmware.

**NOTE:** This firmware upgrade is not compatible with Chinese-language instruments. A separate firmware and operating system update file for Chinese-language instruments is available for download from the Commtest Instruments website.

This document is intended as an overview only. To learn how to use any of the new instrument functionality, please refer to the Help files within Ascent (available from the **Help** menu). Alternatively, download the latest vbSeries/vbBalancer Instrument Reference Guide from our website at <http://www.commtest.com>.

### Orbit Plots

vb7, vb8 and vbBalancer+ instruments are now able to display Orbit Plots, a capability previously only available in the Ascent software. Orbit plots are used to detect abnormal movements of a shaft in a bearing. The plot illustrates the path travelled by the measurement point during the course of the measurement. The orbit's X-Y plot shows the amplitudes from two orthogonal vibration measurements plotted against each other. Instrument Orbit Plot capabilities are restricted to waveform (displacement unit) measurements across two channels.

### Strobe Output

vb7 and vb8 instruments can now be configured to control the output frequency of an attached strobe light. Once a spectrum measurement has been taken, a strobe is connected to the vbX instrument's tachometer LEMO port (via a LEMO to twin 3.5mm plug cable). Using the instrument's onscreen cursor a frequency of interest is selected and the strobe feature activated, setting the strobe's output frequency to match the measurement frequency of interest (up to a maximum of approximately 140 Hz, 8400 CPM). The rotating equipment that corresponds with this frequency will be 'frozen' in place when viewed under the strobe light. This feature is useful for identifying the location of vibration and imbalance in high speed machinery. This system can also be configured to use an external strobe as a tachometer input source.

## 6Pack Capabilities Expansion

DSP improvements in the 3.4.28 firmware version now allow 6Pack measurements to be taken on up to four channels (for vb6 and vb8 instruments). Recording capabilities have also been extended to a maximum of 3200 lines, 40 kHz for single channel measurements and 1600 lines, 20 kHz for dual channel and triaxial measurements. New, lower, 250 Hz and 500 Hz DMin's have also been added to support low speed machines.

## 4-20 mA Support

Support for 4-20 mA current loop sensors has been added to the vb6 and vb8 instrument models. These sensors can be created directly through the instrument interface as well as via the Ascent software ([0] Options>[5] Sensor Setup>[6]-[8] Change Sensor>[4] Create New Sensor or [3] Edit Sensor then cycle through [3] Voltage Rng and Coupling until '4...20mA' is displayed.

**NOTE:** 4-20 mA sensor support is included on all vb6 and vb8 instruments with serial numbers above **40800**. vb6 and vb8 instruments with serial numbers **below 40800** may require re-calibration by Commtest Instruments to enable this feature.

## System Information

System details such as an instrument's current firmware and operating system version, backup firmware, board revision and processor model are now displayed in the instrument's main Memory and System display interface. These details are useful if contacting Commtest customer support for operating system and firmware upgrades, allowing easy identification of suitable update file versions.

## Miscellaneous Improvements

In addition to the previously discussed improvements, the following general changes have been made in the latest vbSeries instrument firmware release:

### Faster measurements

A/D conversion now remains static between measurements, reducing the settling time required by sensors and the resulting time required for individual measurements.

### Improved Proflashing

Instruments now retain their measurement unit settings following a Proflash, avoiding the need to re-set units after each firmware upgrade.

### Balancing improvements

vb7, vb8, vbBalancer and vbBalancer+ instruments now include the ability to split balance weights ([1] Plane A>[5] Split Weight from the 'Balance Weight' screen) and include a new 'Change Radius' calculator ([6] Change Radius Plane A from the 'Balance Weight' screen). These tools are useful if you wish to use several smaller trim weights when balancing rather than a single weight, or if the ideal radius location for your weights is unavailable. The radius calculator will recalculate the weight required based on its intended position; for example, if the weight must be moved further along the the radius of a blade being balanced.

### Mirror database access

The instrument's integrated mirror database can now be manually swapped with the active database in the event of data corruption. This mirror database is a duplicate of the current system

database containing measurement and setup data. Typically the instrument will swap databases automatically if data corruption is detected. Users may now also choose to manually swap to this database by selecting **[0] Options>[4] Memory & System>[2] Swap to Mirror DB**.

#### General usability and stability enhancements

Various software bugs and compatibility issues identified in previous instrument firmware releases have been resolved.

#### Additional documentation and help material added

The instrument's onscreen interactive help system has been updated to reflect revised layouts and new functions.

## New in vbOnline Firmware (5.87.17)

This release does not add any new features to the vbOnline device. It contains several fixes to issues identified since the previous (Ascent 2009) release. vbOnline device owners are encouraged to upgrade firmware in order to improve general product stability.

### Resolved Software and Firmware Issues

The following software and firmware issues have been resolved, and new features added, since the previous Ascent (2009 R2 9.40.137) software and firmware releases.

#### Ascent 2010 Software

##### Improvements since 9.40.137 Release

- (12125) OnlineManager radio buffer management
- (12488) vbOnline not responding to requests to disable
- (12425) Give up on certain comms tasks/requests in the instrument fails to respond
- (12490) Bad minimum and maximum wait times in 0x05 packet
- (8182) Ascent still creating duplicate SE entries for data received from vbX
- (12472) Merging Schedule Entries may not always work
- (10943) Can't re-order locations etc in some folders
- (12525) Pulses Per Rev does not affect Order Tracked recordings
- (12587) Ability to sort machine alphabetically in Ascent
- (12249) Alarm updating - make the re-calc of historical statuses optional, to speed up large databases
- (12603) Changes required to PSet dialog to allow template filtering
- (12291) Exporting XML to File is not correctly Converting

(9605) Need ability to edit database when no instruments are present

(11863) Cannot open previously created database versions

(12530) New machines/points/schedule entry predictions at top of list

(12572) Occasional incorrect waveform duration predicted by Ascent

(10744) Default database creation path incorrect with Windows 7

### Instrument Related

#### vbX

(12449) If vbX OS image file re-named it is not shown.

(12329) Localisation : Ascent GUI modifications for all languages

(12436) vbX OS v3.5 + BIOS update for instrument recovery

(12460) vbX speed benchmark tests added

(12435) vbX resetting to main screen from Route screen when going into sleep mode.

(12307) Wfm Duration Total Time not changing when selecting a different Tach Trigger

(9137) Problems when receiving measurements for more than one user-defined unit

(10368) Ascent not updating baselines

(3634) Request to be able to drive a strobe lamp at selected frequency, to freeze machine motion

(5712) During a ProFlash the instrument must persist all the measurement Units

(7555) Balancing request to add Combined Weights and Changing Radius calculators like in vb3000

(8464) Request for full support for 6Pack on Triax sensors

(9128) Improve 6Pack Demod options for slow speed machines

(9256) Request for Low Frequency Integration Mode

(9346) Request for 6Pack resolution to be extended to 1600 lines

(10232) 4-20mA Sensor Support for vb6 & vb8 instruments

(10265) Error and lockup when trying to receive nothing from USB host

(10376) Need a "Restore Backup Firmware" button

(10520) DC level not correct for high Fmax LTWF recordings

(11789) Keyphasor tach not working in Balancing Setup

(12350) LTWF: freezing after ~900 snapshots

(12589) LTWF: The block offset is not being added resulting in bad waveforms in Ascent

(12313) Collected spectra appear digitized after taking a TSA measurement

(12356) vbXManager: Ability to Change Units

(12385) Request to increase the number of measurements that may be manually imported

(9456) Can't Receive LTWFM via USB Flash Drive

## Appendix

### Changing vbX USB Communications Mode

The vbX instrument supports two modes of USB communications. In 3.4.28 firmware, the default mode is USB Plug 'n' Play. However, some legacy operating system users will not be able to use this mode as the drivers are not supported.

In this case it will be necessary to change to the older "TCP/IP (or Ethernet) over USB" mode. This can be achieved through the following steps.

1. From the vbX main menu, select the **Options** screen by pressing button **[0]**
2. From the vbX Options screen, select the **Network** screen by pressing button **[3]**  
*If your instrument is currently using USB Plug'n'Play mode then this will be shown on the screen next to button [2]*
3. You can change **USB** mode by pressing button **[2]**. This will allow you to select either "Plug'n'Play" or "Ethernet over USB" by pressing the **[Tick/Check]** or **[Alt]** buttons respectively.
4. To change to "Ethernet over USB" mode press **[Alt]**, you will then be prompted to enter the IP address details for this adapter. We suggest accepting the defaults as Ascent is configured to use them automatically.
5. After changing the mode, it is necessary to reset the instrument by pressing **[Alt]+[5]** before the new settings take effect.
6. The procedure for changing back to "Plug'n'Play" mode is the same except that at step 4 you should press the **[Tick/Check]** button. Again, a reset is required after changing modes.