

## EasyOne™ Firmware Version History

This document lists all firmware releases (i.e. internal software versions) of EasyOne™. There are differences in the US and EU versions of the device which are normally stated where applicable. Some versions haven't been distributed or only in a limited way. The changes though are cumulative, that means that changes introduced in a version are also included in later versions. This does not apply if the main release number (the first number) is different. E.g. the features of V04.x x can be different to V02.xx

Version/Date	Description
<b>EasyOne</b> <b>V02.25.00.00</b> <b>V05.10.00.00</b> <b>V06.07.00.00</b> 15.11.2012	<ul style="list-style-type: none"> <li>Bug fix: #EOMB-77 &amp; #EOMB-98 device mode change in the configuration settings did show wrong line for temperature entry/loudspeaker volume depending on previous mode (only in V05.10.00.00 &amp; V06.07.00.00)</li> <li>Bug fix: #EOMB-91 LungAge calculation was erroneous on printouts for Post tests which are printed directly from the end-of-test-menu (setting LungAge: ON, Patient data with Smoker: YES or FORMER). It was correct if printed from the main menu.</li> <li>Bug fix: #EOMB-97-TechId entry did not work anymore in V05.09.00.00 &amp; V06.06.00.00. The entered TechId was not stored (fixed in V05.10.00.00 &amp; V06.07.00.00)</li> <li>Improvement: #EOMB-96 Additional predicted value support for: Quanjer (GLI) 2012, Falaschetti and Zapletal 2003 (only in V06.07.00.00)</li> </ul>
<b>EasyOne</b> <b>V05.09.00.00</b> <b>V06.06.00.00</b> 08.03.2012	<ul style="list-style-type: none"> <li>Bug fix: #EOMB-82: The Technician Id entry did not work as expected if a recall of a test or a calibration check is performed</li> <li>Bug fix: #EOMB-86: direct printing using EasyWare after performing a calibration check did print the second last record, not the calibration check</li> <li>Bug fix: #EYP-462 updating a EasyOne with V05.07.00.00 did not check the compatibility of the configuration. This could caused wrong settings for e.g. ethnic correction</li> <li>Improvement: : #EOMB-80 "Accuracy confirmed" is now only printed if both in &amp; ex are within +/-3.5%</li> <li>Improvement: #EYP-459 calibration checks could end early if paused for more than 2 sec</li> <li>Improvement: #EOMB-88 after a SVC test an FVC and FVL test can be added. Additionally a tidal FVL can now be added</li> <li>Bug fix: #EYP-268 under some conditions an error #7 / #1 could occur. This means that single trials weren't stored correctly</li> </ul> <p>Additionally V06.06.00 has the following changes:</p> <ul style="list-style-type: none"> <li>Additional predicted value support: PADILLA_2006, PADILLA_2001, KLEMENT, VILOZNI, NYSTAD, PADILLA_2003</li> <li>Revised STANOJEVIC_2009 predicted, which supports now the interpolation between years for date entries</li> </ul>
<b>EasyOne</b> <b>V02.24.00.00</b>	<ul style="list-style-type: none"> <li>In version V02.23.00.00 the Austrian88, Spain (Roca), Gulsvik and Berglund predicted were erroneously disabled</li> </ul>
<b>EasyOne</b> <b>V02.23.00.00</b>	<ul style="list-style-type: none"> <li>Austrian 94 predicted is integrated in the delivery</li> <li>Date on the printout was fixed</li> <li>Predicted is now updated to be the same as the current version available in all NDD products</li> </ul>
<b>EasyOne</b> <b>V05.08.00.00</b>	<ul style="list-style-type: none"> <li>Updates to the signal processing to take full advantage of the EasyOne hardware version 7.7</li> <li>Predicted and quality of test evaluation are now updated to be the same as the current version available in all NDD products</li> <li>Swedish translation is available also</li> </ul>

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<b>EasyOne 2010-7</b>	<ul style="list-style-type: none"> <li>• Predicted values computation was updated.</li> <li>• Gold/Hardie interpretation was updated</li> <li>• The day of last calibration check is no longer displayed on the printout</li> <li>• Some refinements were implemented on the processing of the signal from the sensor</li> <li>• The bootloader was adapted to hardware 7.7 (for more details on HW change contact TM)</li> <li>• Swedish implementation is available for EasyOne-s with PictBridge support</li> </ul>
<b>EasyOne 2010-6 &amp; V05070000 27.08.2010</b>	<ul style="list-style-type: none"> <li>• Firmware version 06.03.00.01 <ul style="list-style-type: none"> <li>• Prints the date of the last calibration check on the printout</li> <li>• Displays a more meaningful message when maximum number of trials per test is reached</li> <li>• Corrects error 7 which appeared sometimes when the user rejects a trial</li> <li>• Enhances the accuracy in which the measurements are processed in EasyOne. This is possible due to the enhancements in the hardware. This is valid for all devices with serial number above 100'000</li> </ul> </li> <li>• Firmware version 05.07.00.00 <ul style="list-style-type: none"> <li>• Corrects error 7 which appears sometimes when the user rejects a trial</li> </ul> </li> </ul>
<b>EasyOne 2010-5 04.05.2010</b>	<ul style="list-style-type: none"> <li>• This include the following main updates: <ul style="list-style-type: none"> <li>• Predicted Austria 94 as reloadable module</li> <li>• Improvements and fixes in printing: handling of restart in case of errors</li> <li>• Print of multiple reports VIA PC fixed</li> <li>• Fixed date format handling</li> <li>• Changed PEFT check from 120ms to 160ms for all modes except NLHEP</li> <li>• Removed "At risk for COPD" message for smokers in Gold/Hardie interpretation</li> </ul> </li> </ul>
<b>Predicted Austrian 94 V01.00.00.00 04.05.2010</b>	<ul style="list-style-type: none"> <li>• EZ1_Predicted_Austrian_94_V01000000.hex file is the reloadable module for Austria 94 predicted.</li> </ul>
<b>EasyOne Chinese 29.04.2010</b>	<ul style="list-style-type: none"> <li>• Release of EasyOne with Chinese resources on EasyOne hardware with S.N. above 80'000</li> </ul> <p>This firmware can be later upgraded to support PictBridge version.</p>
<b>Cradle V03.03.14.00 08.03.2010</b>	<ul style="list-style-type: none"> <li>• Release EasyOne 2010-4 <ul style="list-style-type: none"> <li>• Fixed: connection to PC. In certain situation the connection to PC was unreliable.</li> <li>• Fixed: printing of reports with a lot of details via PictBridge. Sometimes the images created by EasyOne were too large for the Cradle to handle. In these cases the printing would fail. This affected mostly reports Tidal FVL tests.</li> </ul> </li> </ul>

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<b>V06.01.00.00</b> 01.02.2010	<ul style="list-style-type: none"> <li>• Release of project EasyOne 2010-1 versus EasyOne 5.XX               <ol style="list-style-type: none"> <li>1. <b>Fixed:</b> doing a post test in some situations lead to erroneous data saved in the device memory</li> <li>2. <b>Removed:</b> the possibility of deleting all records in the main menu by pressing 1-2-5 sequence</li> <li>3. <b>Added:</b> the possibility to delete sets of records based on a criteria by pressing 1-5-9 sequence in the main menu</li> <li>4. <b>Available languages</b> in the package:                   <ol style="list-style-type: none"> <li>a. English</li> <li>b. French</li> <li>c. German</li> <li>d. Italian</li> <li>e. Spanish</li> <li>f. Brazilian/Portuguese</li> </ol> </li> <li>5. <b>Added:</b> PictBridge Printer support</li> <li>6. <b>Incompatible</b> with any device with Serial Number below 80000</li> </ol> </li> </ul>
<b>V05.06.00.00</b> 26.01.2010	<ul style="list-style-type: none"> <li>• <b>Fixed:</b> doing a post test in some situations lead to erroneous data saved in the device memory</li> </ul>
<b>V02.22.00.00</b> 12.11.2009	<ul style="list-style-type: none"> <li>• Fixes the bug in the Disability test that affects V02.21.00.00 Due to this bug the data of the disability test is corrupted at the end of the test. This fix is specific for U.S. market.</li> </ul>
<b>V02.21.00.00</b> 06.10.2009	<ul style="list-style-type: none"> <li>• Fixes bug 443 aka millennium bug</li> <li>• This version updates V02.20.00.00 only and it does not contain any other fixes or changes</li> </ul>
<b>V06.00.01.00</b> 17.09.2009	<ul style="list-style-type: none"> <li>• Fixes the transition between years (see V05.05.00.00 for more details)</li> </ul>
<b>V05.05.00.00</b> 17.09.2009	<ul style="list-style-type: none"> <li>• Fixes the transition between years. If the date is 31-st of December 2019 when the year changes to 2020 the year from the internal clock has the wrong value.</li> </ul>
<b>V06.00.00.00</b> 08.09.2009	<ul style="list-style-type: none"> <li>• EasyOne implements support for printing using PictBridge protocol.</li> <li>• This is currently US only product and it is distributed under EasyOnePlus name</li> <li>• Requires a different hardware compared to V05 of EasyOne</li> </ul>
<b>V05.04.00.00</b> 15.09.2009	<ul style="list-style-type: none"> <li>• Fixes the system date bug. Due to this bug, when users input a date greater than 2009 it sets the wrong year in the system internal clock</li> </ul>
<b>V05.03.01.00</b> 17.06.2009	<ul style="list-style-type: none"> <li>• Printout change for post tests</li> <li>• Check for the new spirette</li> </ul>
<b>V05.01.00.00</b> 22.10.2008	<ul style="list-style-type: none"> <li>• Improved baseline setting (input from Mary Townsend)</li> <li>• Support for Tidal breathing FVL in combination with EasyWare 2008</li> <li>• Several small bug fixes</li> <li>• Support for 5 languages: EN, DE, FR, SP, IT</li> </ul>

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<b>V05.00.00.00</b> 25.01.08	<ul style="list-style-type: none"> <li>• This release does only support EasyOne with P-processor type (&gt; SN 50505)</li> <li>• The EasyOne database can be by an hidden code 1-2-5</li> <li>• The last cal.-check can be searched by a hidden code 1-3-6</li> <li>• Bug/change #165: BPM parameter added to MVV printout</li> <li>• Bug/change #298: Change of the database to handle more than 3 trials. Is currently set to 8 trials, but is flexible to handle more. Caution: For an update the existing EasyOne database must be deleted and the storage option must be changed from BEST CURVE to ALL CURVES. In order to update old devices please follow the procedure described in <i>EZ1-Memo8TrialUpDowngradeProcedure.pdf</i>. In order to support 8 trials EasyWare 2007 (V2.11) must be used.</li> <li>• Bug/change #324: VT curve now printed fully and not only up to FET</li> <li>• Bug/change #370: Edit DB menu / Search and View / Search: When user puts EasyOne in cradle just before confirming the test selection, then takes it out of the cradle and performs the command again, EasyOne does not react, then on ENTER directly shows the test selected previously</li> <li>• Bug/change #410: abrupt end check did handle end-of-test wrong for inhalation</li> <li>• Bug/change #412: LLN check isn't performed for POST tests</li> <li>• Bug/change #413: Calibration check procedure revised to improve user handling. A minimum of three trials is requested to reduce possible user procedure error. The pass/fail is changed to 3.5%</li> <li>• Bug/change #417: reproducibility criteria was wrong (100ml instead of 150ml)</li> <li>• Bug/change #420: New check for flow at the beginning of the test to avoid losing volume due to the patient blowing to early</li> <li>• Bug/change #424: Disability test was not stored if started over RECALL, NEW</li> <li>• Bug/change #425: Multi flow calibration check enabled for all device types. User interface improvements to ease handling and reaching the flow targets</li> </ul>
<b>V02.20.00.00</b> 25.01.08	<ul style="list-style-type: none"> <li>• Bug/change #299: printing via PC of an calibration check did not work</li> <li>• Bug/change #324: VT curve now printed fully and not only up to FET</li> <li>• Bug/change #410: abrupt end check did handle end-of-test wrong for inhalation</li> <li>• Bug/change #412: LLN check isn't performed for POST tests</li> <li>• Bug/change #417: reproducibility criteria was wrong (100ml instead of 150ml)</li> <li>• Bug/change #420: New check for flow at the beginning of the test to avoid losing volume due to the patient blowing to early</li> </ul>
<b>V02.19.00.00</b> 17.09.07	<ul style="list-style-type: none"> <li>• Bug fix #404: In V02.17.00.00 &amp; V02.18.00.00 the calibration result screen and printout did display the additional pass/fail wrongly. On the printout the accuracy confirmed statement is printed if the result is outside the limits.</li> </ul>
<b>V02.18.00.00</b> 02.08.07	<ul style="list-style-type: none"> <li>• Bug fix #402: An extra page was printed on HP printers because of a missing end of command character during the printer initialization</li> <li>• Bug fix #403: the device serial number was wrongly displayed in the device and the calibration check printout</li> </ul>

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<b>V02.17.00.00</b> 12.07.07	<ul style="list-style-type: none"> <li>• Calibration check limits changed from 3.0 to 3.5 %</li> <li>• Power off handling changed, so that device also switches off if docked in the cradle/if not communicating with EasyWare</li> <li>• If EasyWare changes to online mode, the actual record in EasyOne is set to the latest record stored</li> <li>• Improved support for lung spirometry curve transfer</li> <li>• MVV predicted is only calculated if not done previously in the reloadable predicted source</li> <li>• EasyOne device serial numbers &gt;65535 supported</li> <li>• Best Trial calculation is now age dependant: use of FEV0_5 instead of FEV1 if age ≤ 6</li> <li>• Reproducibility check is revised to new ATS and ATS preschool standard</li> <li>• QC Grade calculation is revised to new ATS and ATS preschool standard</li> <li>• Minimal peak flow time (PEFT) reduced from 40 ms to 25 ms</li> <li>• Tidal Breathing detection for SVC improved</li> <li>• BEV limit age adapted (≤6 years: check of BEV &lt; 80ml or &lt; 12.5% of FVC)</li> <li>• New parameters FEV0.5 and FEV0.75 for FVC test added</li> <li>• Improved flow filter to pass ATS waveforms A &amp; B</li> <li>• Bug fix #400: reject /accept of the first SVC trial was doubling the record</li> <li>• power down time changed from 15 to 25 minutes (50min if connected to the cradle)</li> </ul>
<b>V04.01.00.00</b> 28.09.06	<p>Special version for GE Healthcare only.</p> <ul style="list-style-type: none"> <li>• Records send from the PC (GDT interface) can be blocked from editing/deleting</li> <li>• Online Mode/Screen Connector improvements for direct test menu display</li> <li>• EasyOne logo is shown when PC Interface is not active</li> </ul>
<b>V04.00.04.00</b> 30.06.06	<p>Special version for Swiss 'Raucher Screening II' campaign, limited distribution</p> <ul style="list-style-type: none"> <li>• New region selection screen to have device type independent presets</li> <li>• The device is automatically restarted after a factory reset</li> <li>• Records send from the PC (GDT interface) can be blocked from editing/deleting</li> <li>• Firmware runs on all hardware types, but resources (languages/ questionnaires/ interpretations etc.) are only available for devices with P-type processor</li> <li>• New backup feature for firmware variant 4 (hidden code 1-2-6)</li> <li>• Only language resources with version &gt; V02.00.00.00 supported</li> <li>• Screen Connector improvements for direct test menu display</li> <li>• Wintek LCD display optimized</li> </ul>
<b>V02.16.00.00</b> 16.06.06	<ul style="list-style-type: none"> <li>• Display of inspiratory curve for FVL test has been added</li> <li>• Interpretation is re-enabled for quality grade D&amp;F for none frontline/NLHEP tests</li> <li>• Bug fix #380: HP460 printer did not work correctly</li> <li>• Steady tidal breathing detection improved for SVC test</li> <li>• Patient data records can now be marked as transferred from the PC</li> <li>• Bug fix #378: best value/best trial setting wasn't used for curve result screen</li> <li>• SVC curve display and VC match feedback screen now with additional parameter display</li> </ul>
<b>V02.14.02.00</b> 19.09.05	<p>Special version for SAV, limited distribution</p> <ul style="list-style-type: none"> <li>• Interpretation note changed</li> <li>• Bug fix/change for SAV Interpretation implemented</li> </ul>

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<b>V02.15.00.00</b> 13.09.05	<ul style="list-style-type: none"> <li>The width of the print report has been changed slightly to adapt for the 150dpi printers and the '#' sign is moved to the left to add additional space</li> <li>In case now inspiration is performed for an FVL trial, the trial is set to unacceptable and the inspiratory values are set to zero</li> <li>Bug fix #355: FVC/FVL test menu wasn't shown in end-of-test screen of SVC test for V02.14.00.00 release</li> <li>Bug fix #356: SVC max. duration wasn't handled correctly and hasn't been fully fixed by the previous release (see Bug fix #333)</li> <li>Bug fix #357: Questionnaire feature wasn't available in release V02.14.00.00</li> <li>Bug fix #358: If a SVC trial is interrupted and then a FVC/FVL test added the stored curve is corrupted</li> </ul>
<b>V02.14.00.00</b> 08.08.05	<ul style="list-style-type: none"> <li>The buzzer frequency has been changed to have a 'louder' signal</li> <li>POST tests are now also possible if the pre-test has been performed within the last day (24-48 hours). Before, it was possible only on the same date</li> <li>The actual date is updated if a new test is performed or the general settings are selected. Before it was just once read during the device power on</li> <li>The option to switch the PEF parameter off has been renamed to "OFF"</li> <li>The option to selected no additional pediatric predicted has been changed to "-- ---"</li> <li>The option to selected no additional interpretation has been changed to "-----"</li> <li>Occasional error #49 error screens during printing have been changed to the standard print error message</li> <li>Hardware version V7.0 (new LCD) support added</li> <li>CANON iP2000 and similar printer driver added (CANON iP1500 does NOT work!)</li> <li>Bug fix #333: wrong values could have been reported for SVC test in max. duration case (&gt;40 sec.)</li> <li>In case no inspiration is performed for an FVL trial, the trial is set to unacceptable and the inspiratory values are set to zero</li> <li>Bug fix #351: For US devices the Multi flow cal.-check always displayed FAILED even if successful. This has been introduced in V02.12.00.00 which wasn't distributed widely</li> <li>Bug fix #353: Hibbert/Polgar selection problem fixed</li> </ul>
<b>V02.13.02.00</b> 18.02.05	Special version for SAV, limited distribution
<b>V02.12.00.00</b> 13.01.05 (limited distribution)	<ul style="list-style-type: none"> <li>Rudimentary cough detection added with additional QC feedback screen (V1.5)</li> <li>Expiratory BTPS factor changed to 2%. For firmware updates only activated if factory defaults are chosen</li> <li>'P' processor type uses now extended re-loadable resource area</li> <li>RTC routines optimized</li> <li>Linearity correction now interpolated</li> <li>PEF/PIF calculation now calculated as max. value, not filtered</li> <li>Restore database is now interruptible by ESC</li> </ul>
<b>V02.11.00.00</b> 18.11.04 (Special version with limited distribution)	<ul style="list-style-type: none"> <li>RLE compressed bitmaps for start up screens are now supported</li> <li>Disability &amp; Multi-flow calibration check disabled for this version, because of code space saving</li> <li>New re-loadable questionnaire feature added</li> <li>Patient data records can now also be printed</li> <li>Questionnaire reference added in Technician ID field</li> <li>Hard factory reset deletes the database totally</li> <li>New bitmap selection dialog</li> <li>UI functions are now also callable by re-loadable resources</li> </ul>

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<b>V02.10.00.00</b> 29.09.04 (only distributed for test purposes)	<ul style="list-style-type: none"> <li>• New device mode NLHEP_MODE added which is default for frontline devices</li> <li>• Frontline devices: additional pediatric predicted is now pre-set to POLGAR</li> <li>• Lung Age pre-set as disabled for frontline US devices</li> <li>• Revised NLHEP interpretation for QC grades D&amp;F with additional text resources</li> <li>• %change no longer shown for frontline US tests</li> </ul>
<b>V02.09.00.00</b> 08.07.04	<ul style="list-style-type: none"> <li>• A revised linearity correction has been implemented</li> <li>• A problem has been fixed where there have been 'strange' curves in the PC online mode. This was caused by the EasyOne sending wrong data. The effect was only a display problem in the PC, the data and curve storage was not affected</li> <li>• Some PC connection problems have been solved. A new USB cradle firmware V01.02.00.00 is also needed</li> <li>• The LLN calculation for Morris and ERS predicted has been adapted to the ATS recommended method of subtracting <math>1.645 * SEE</math> (Standard Error of Estimate) from the predicted for the LLN</li> <li>• The FEV1/FVC predicted parameter for Morris (Morris, J.F. West (1976) 125:110-118) has been added</li> </ul>
<b>V02.08.00.00</b> 24.06.04 (limited distribution)	<ul style="list-style-type: none"> <li>• New feature added: If the PEFT of a trial is &lt; 40ms an early blow start is assumed and the trial is set unacceptable. Feedback message: 'Wait until buzz...'</li> <li>• POLGAR predicted added (Polgar, Promadhat (1971) Pulmonary Function Testing in Children: Techniques and Standards. W.B. Saunders Co., Philadelphia)</li> <li>• Number entry field reacted false if the number of entered characters exceeded the field width</li> <li>• BTPS was not printed for frontline tests</li> <li>• FVC parameter was printed even when FEV6 was selected for some firmware versions</li> <li>• If a test has been searched (NAME or ID), selected with ENTER and then printed, the curve was sometimes missing (problem introduced in V2.4)</li> </ul>
<b>V02.07.00.00</b> 19.02.04	<ul style="list-style-type: none"> <li>• Problem fixed for NLHEP interpretation if used predicted reference values did not support LLN</li> <li>• Language change using EasyWare did not change device language online. Power cycle was needed</li> <li>• Date of birth added to printout if activated</li> <li>• Height limits for Knudson 83 predicted adapted</li> <li>• Lung Age calculation was missing for AFRICAN &amp; HISPANIC male</li> </ul>
<b>V02.06.00.00</b> 27.01.04	<ul style="list-style-type: none"> <li>• Print colour bitmap feature added</li> <li>• Interpretation reload functionality revised</li> <li>• MVV printout in language other than English did not work correctly</li> <li>• Printer name display for USB revised that black&amp;white is displayed correctly</li> <li>• Rare 'Check Spirette insertion' problem for device &gt; SN46000 fixed</li> </ul>
<b>V02.05.00.00</b> 18.09.2003	<ul style="list-style-type: none"> <li>• Multi-flow calibration check procedure simplified (US version only)</li> <li>• Device type &amp; firmware version added to first time start up screen</li> <li>• Record number has been added to printout</li> <li>• Print via PC did not work correctly in V02.04.00.00 with the USB cradle</li> <li>• Japanese printout did not work correctly on HP printers</li> <li>• Japanese keyboard definition for '8' key contained an error</li> <li>• Ethnic correction did not work correctly when predicted reference does not include Caucasian ethnic group (e.g. Japanese JRS2001 reference values)</li> <li>• Software/resource update was very slow in V02.04.00.00 and could lead to an error</li> </ul>

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<b>V02.04.00.00</b> 23.07.2003	<ul style="list-style-type: none"> <li>• EasyOne Screen feature added</li> <li>• Print starts directly if cradle is connected in end-of-test screen</li> <li>• New feature REJECT added if automated QC is switched OFF</li> <li>• Improved SVC tidal breathing detection algorithm</li> <li>• EasyWare synchronization speed optimized</li> <li>• Number field now with leading zero entry</li> </ul>
<b>V02.03.00.00</b> 25.04.2003	<ul style="list-style-type: none"> <li>• Additional predicted reference values can now be added with the EZFlash tool</li> <li>• Additional interpretation algorithms can now be added with the EZFlash tool</li> <li>• SVC test gives also a signal to start the full in-/expiratory maneuver after 10 breaths, but marks the trial as unacceptable, reporting all parameters</li> <li>• For starting a new test by using an existing one (NEW), the patient data no longer has to be confirmed</li> <li>• SVC test can now be combined with FVC or FVL (before only FVC possible)</li> </ul>
<b>V02.02.00.00</b> 05.03.2003	<ul style="list-style-type: none"> <li>• strict NLHEP criteria switched off again</li> <li>• Lung Age can now also be printed for NLHEP/frontline tests</li> </ul>
<b>V02.01.00.00</b> 26.02.2003	<ul style="list-style-type: none"> <li>• HP printer did not print special characters correctly (ä,ö, etc.)</li> <li>• Language entry was always set back to ENGLISH in configuration setting</li> <li>• deletion of the first record in the database produces a temporary error #67 -&gt; ON/OFF solved the problem</li> <li>• deletion of all records produces a stall under View Results -&gt; adding a new test removed the problem</li> <li>• Quick test patient data is not printed any more</li> </ul>
<b>V02.00.00.00</b> 03.12.2002	<ul style="list-style-type: none"> <li>• Full support for USB cradle. Old firmware is also working with EasyWare, but slow. Printing with the USB is not possible with old firmware</li> <li>• search feature (after date, name, ID) added. If LAST TEST is selected the database can be skipped through like the old firmware versions</li> <li>• Menu point Patient data edit has been renamed to Database Edit. There a test can be edited and deleted</li> <li>• structure for language resources has been changed to make it possible to add new languages with the EzFlash tool later on</li> <li>• the start up splash screen (EasyOne) can be changed by loading a different logo</li> <li>• frontline test support now strict NLHEP criteria (QC grade D&amp;F can't be viewed or printed, etc.)</li> <li>• Printout date&amp;time is printed</li> </ul>
<b>V01.20.00.00</b> 27.11.2002	<ul style="list-style-type: none"> <li>• fixes database error #6 problem</li> </ul> <p>Does not support piezo sensor type!</p>
<b>V01.19.00.00</b> 23.08.2002	<ul style="list-style-type: none"> <li>• two page printout did not work correctly in V01.14.00.00 to V01.17.00.00</li> </ul> <p>Does not support piezo sensor type!</p>
<b>V01.18.00.00</b> 10.07.2002	<ul style="list-style-type: none"> <li>• Support for new piezo sensor type</li> <li>• BTPS is now also printed for SVC tests</li> </ul>
<b>V01.17.00.00</b> 11.06.2002	<ul style="list-style-type: none"> <li>• Problem with erroneous spirette insertion check fixed. The device could end up in an endless loop show the "Check spirette insertion" message.</li> </ul>
<b>V01.16.00.00</b> 06.05.2001	<ul style="list-style-type: none"> <li>• Fix of a problem introduced in version 1.15 where the variability line for a post test did overwrite the pre test</li> <li>• Fix do a rare problem where the VT curve was not displayed due to a negative value of Tzero</li> <li>• Abrupt end criteria set back to 100 ml in 0.5 sec. This reduces the occurrence of "Blow out longer" message.</li> <li>• the serial number of the device is printed on the report</li> </ul>

## EasyOne™ Firmware Version History



Version/Date	Description
<b>V01.15.00.00</b> 15.01.2002	<ul style="list-style-type: none"> <li>printing speed has been optimized</li> <li>Barcelona predicted reference now called Roca (Spain)</li> <li>Main menu ordering changed: Edit Patient before Calibration Check</li> </ul>
<b>V01.14.34.00</b> 19.12.2001 (limited distrib.)	<ul style="list-style-type: none"> <li>Special version with Boehringer Ingelheim bitmap at startup</li> <li>Problem with Canon S400/S450 printers fixed</li> </ul>
<b>V01.14.00.00</b> 03.09.2001	<ul style="list-style-type: none"> <li>battery charge status is checked also during the start of the test</li> <li>configuration settings are now stricter checked before set by the PC program</li> <li>configuration printout added in print menu. Activated by hidden key sequence 1-3-6</li> <li>amplitude setting during start of test revised. New limits and error #14/#15 are no longer used -&gt; check correct spirette insertion message</li> <li>added modem and search functionality, but currently inactive</li> </ul>
<b>V01.12.16.00</b> 12.04.2001 Only distributed in Scandinavia.	<ul style="list-style-type: none"> <li>new Scandinavian version with Norwegian and Swedish language</li> <li>new predicted references: Berglund, Gulsvik and Hedenstöm</li> <li>changed predicted extrapolation for Austria and Spain</li> <li>Zapletal now separated from ERS predicted reference</li> </ul>
<b>V01.12.00.00</b> 20.03.2001	<ul style="list-style-type: none"> <li>if the device is placed in the cradle in the end-of-session screen, the device doesn't perform a reset after taking it out of the cradle.</li> <li>problem with corrupt database fixed (in these cases the device did show the "Device Self Test failures #2 or #7)</li> <li>added Lung Age calculation</li> <li>corrected problem with HP printers where the %Chg column could be cut off</li> <li>improved print speed for Epson printers</li> <li>new result screen with FEF25, FEF50, FEF75 in DIAGNOSTIC mode</li> <li>new parameter ordering FVC, FEV1 etc.</li> <li>combined SVC/FVC test: SVC time added to FVC POST test report</li> <li>Rare problem solved where extrapolated pediatric source did show a different adult predicted source on the report</li> <li>HSU and ZAPLETAL predicted values extrapolated down to 4 years and 93 cm</li> <li>new feature: patient/test selection screen shows now combined ID/name</li> <li>maximum number of trials per test now limited to 15</li> <li>EU version: ERS parameter naming changed (MEF25 instead of FEF75 etc.)</li> <li>US version: OSHA/DISABILITY tests now also editable</li> </ul>
<b>V01.11.00.00</b> 12.12.2000	<ul style="list-style-type: none"> <li>Flow linearization slightly improved</li> <li>new end-of-test criteria (2s/45ml)</li> <li>ERS predicted values extended up to 90 years of age</li> </ul>
<b>V01.10.00.00</b> 30.11.2001	<ul style="list-style-type: none"> <li>Abrupt end check for FVL tests is changed (response to German customer feedback)</li> <li>EU Frontline version: Predicted default changed to ERS / Zapletal.</li> </ul>
<b>V01.09.00.00</b> 31.10.2000	<ul style="list-style-type: none"> <li>Correction of minor French language spelling mistakes.</li> </ul>
<b>V01.08.00.00</b> 18.10.2000	<ul style="list-style-type: none"> <li>Interpretation of results with QC grade F are shown (response to customer feedback).</li> <li>Correction of a small error where in some cases incorrect record numbers are shown on the selection screen.</li> </ul>
<b>V01.07.00.00</b> 17.10.2000 This version has not been distributed	<ul style="list-style-type: none"> <li>added slow vital capacity (SVC) test</li> <li>printer name shown in connect cradle message and during printing</li> <li>EU Frontline version: Added predicted selection to Test</li> <li>Added Altitude entry in General configuration</li> <li>Patient Data Entry age entry range check introduced for birth date &gt; actual date</li> </ul>

Version/Date	Description
	<ul style="list-style-type: none"> <li>• Error in left key handling for alpha input corrected</li> <li>• Best value for FIVC in FVL result screen added</li> <li>• Added date range check in print range function</li> <li>• Added new end of session screen, also entered by selecting QUIT in coaching screens during the session</li> <li>• ndd Copyright added to report</li> <li>• changed handling of unacceptable trials: variability calculation, printing</li> <li>• Added extended predicted range warning for MVV</li> <li>• Corrected text cut off problem on time scale printout</li> <li>• FV curve shows now FEV1/FVC and variability of test session</li> <li>• Added predicted calculation for VC, VC_LLN for all predicted sources</li> <li>• predicted range extended to 210cm</li> <li>• Predicted values &lt;0 are suppressed</li> <li>• QC grade calculation revised</li> <li>• Added supported for international alpha keys (special characters)</li> <li>• alphanumeric entry now start with alpha character (a-b-c-2 instead of 2-a-b-c)</li> <li>• automatic power down time extended to 15 minutes</li> <li>• EU version: Italien language support</li> <li>• EU Frontline version: curve display added</li> <li>• US version: added multi flow calibration check</li> <li>• US version: French support</li> <li>• US version: QC Grade Caution message handling changed for OSHA/NIOSH</li> <li>• US version: added SSA disability test</li> </ul>
<b>V01.06.00.00</b> 28.08.2000	<ul style="list-style-type: none"> <li>• US Frontline version: Test results with quality grades D or F can be viewed and printed.</li> </ul>
<b>V01.05.00.00</b> 28.07.2000	<ul style="list-style-type: none"> <li>• Correction of a database problem that can occur after approx. 1000 test cycles. In that case the following error message is displayed: ERROR / Device Self Test failure #54 / Please contact service. The device is no longer operational and has to be sent back to ndd.</li> </ul>
<b>V01.04.00.00</b> 21.07.2000 This version has not been distributed	<ul style="list-style-type: none"> <li>• option to store and print 3 curves (storage must be activated in Test settings, printout option in Print settings).</li> <li>• new printout option VT large</li> <li>• % variability added on printout and view results</li> <li>• variability shown is now always session variability</li> <li>• changed QC for FVC tests: limit set to 200ml for B 250ml for C</li> <li>• revised "abrupt end" algorithm</li> <li>• EU version: French language support</li> <li>• US version: OSHA test type with 100ml / 5% end of session criteria, fixed printout/storage option (3 curves, independent from setting)</li> </ul>
<b>V01.03.00.00</b> 05.06.2000	<ul style="list-style-type: none"> <li>• First production release.</li> </ul>