

# ICU Release Log

Rev	Date	Description
1.0	14Nov00	1 Initial release
1.1	14Nov00	1 Fixed graph y label clipping
		2 Added readings/secn display
		3 Changed App Conf to Application on mode buttons
1.2	14Nov00	1 Changed Rx timeout to work around Win98 timer resolution problem
1.3	14Nov00	1 Add auto setting of unity gain when entering cal mode and restore application gain settings when leaving cal mode
		2 Added calibration assistance module to calculate gains and offsets from linear regression of calibration measurements
1.4	15Nov00	1 Corrected IRIG channel output to start with channel 1
1.5	16Nov00	1 Get application configuration date from application configuration file
		2 Added colored channel numbers and channel names to channel tabs
		3 Added read of instrument configuration when switching modes an reset for calibration and activation modes to make sure that ICU and instrument are synchronized.
1.6	20Nov00	1 Added display and entry of inverted output gains per NAWCAD request.
1.7	21Dec00	1 Measurement recording to log window added (data can be cut and paste to file)
		2 Fixed IRIG commutate programming bug
		3 Enhanced logging of changes. File extension changed from .cal to .log.
		4 Added automatic saving of instrument settings to .set file
		5 Fixed internal bugs which could occasionally cause icu to crash
		6 Cal button changes color to yellow when new cal values are available to be written to the instrument
1.8	28Dec00	1 Updated install procedure
1.9	28Dec00	1 Simplified install procedure
1.10	4Jan01	1 Added ability to modify logo in lower left of screen
1.11	5Jan01	1 Enhanced install to pop-up setup dialog when icu.ini is missing
	11Jan01	1 Clarified section 6.b.i of "Calibration Using ICU Software" note to more precisely identify entry box in which to place the excitation value

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1.12	25Jan01	1 Changed about command button to be always enabled, but COM port settings only available in IDLE.
		2 Added cal point count to setup dialog & INI file. This allows you to set how many points you want to average for each cal measurement point.
		3 Change button "Set mx+b Now" to "Calculate Input Sensor Cal Values"
		4 Minimize button enabled on Main form.
		5 Program checks screen size and aborts when less than 800x600 pixels
		6 Removed reset command when going into Activate and Cal modes since it causes 65210A to lose power.
		7 Added basic calibration script capability.
1.13	25Jan01	1 Preprocessing added to script processing
		2 Minimization added to script form
		3 Logging to a CSV file added
1.14	19Feb01	1 Activate mode enabled when settings match (allow turning power on/off)
		2 High speed streaming output added by outputting IRIG on 485
		3 Fixed DSP rate support added
		4 Carriage return on Cal Pt field now causes measure operation
		5 Log start/stop and log file move commands added to script. CALGEN.SRC script updated to use these commands
		6 Script startup now uses bar to show progress
1.15	27Feb01	1 Fixed graph so that max value of 65535 is not clipped
		2 Recalculate frame rate when number of channels is changed
		3 Modified to remove white box around numbers on tabs when using 256 colors. (Windows still has problems when restricted to 256 colors.)
1.16	21Mar01	1 Added Units Conversion
		2 Debug settings/buttons/reports hidden unless debug enabled in setup
		3 Add warnings if DSP or Transmitter were disabled when debug enabled
		4 Enlarged buttons for more descriptive labels
		5 Internal displays and buttons hidden unless enabled in setup box
		6 Frame counter and CRC options added to IRIG
		7 Acquisition file name now based on instrument serial number
		8 Measure button added to monitor mode
		9 Added display of recording time when starting high speed acquisition.

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1.17	04Apr01	1 Added header to binary burst file to allow future processing
		2 Added temperature sensor 2 to offline default 65210A configuration
		3 Added check for correct version of calibration script
1.18	09Apr01	1 Print Log bug fixed
		2 Calibration changed to disconnect when communication error is detected to prevent lock-up when used with a slow computer
		3 Application and log file enhanced for readability
		4 CRC added to calibration info in log to allow detection of manual edits
		5 Added dialog boxes to help users set communications parameters
		6 Added quality of fit warning to calibration and added fit info to log when calibration data is written to instrument
		7 Continuous logging to file disabled in CALGEN.SCR to allow scripts to work with slow computers.
		8 "Cal Pt" on calibration screens changed to "Stimulus" to be constant with log file formatting
1.19	20Apr01	1 Added Telemetry report with TMATS encoding
		2 Enhanced reporting formats
1.20	23Apr01	1 Fixed password and other bugs introduced in 1.19
1.21	21May01	1 Added RS485 multidrop address selection
		2 Added battery monitor
		3 Fixed ICU to display properly when system configured to use large fonts
1.22	21May01	1 Same as release 1.21
1.23	28May01	1 Split Telemetry & TMATS into two reports
		2 Added ability to output report to file
		3 Changed TMATS P-1\MF\N:0 to P-1\MF\N:1
		4 Security enhancements and automation added.
1.24	31May01	1 Fixed start-up problem when instrument not powered
		2 Fixed TMATS bugs
		3 Reduced log size to work around memory allocation bug in Windows
		4 Changed to run at REALTIME priority to try and work around Windows communications problems
1.25	30Aug01	1 Added "Program Usage" modes
		2 Enhanced communications to 65210A

Rev	Date	Description
1.26	13Sep01	1 Arranged entry fields to allow movement to next field by pressing TAB
		2 Fixed button to remove yellow after values are written to instruments
		3 Enhanced battery monitoring to prevent writing when less than 10%
1.27	31Oct01	1 Added Frames/Sec to Telemetry report
		2 Added Notes field to top of each report
1.28	03Jan02	1 Changed to activate Self Test immediately
		2 Changed to write protect calibration parameters in configure mode
		3 Calibration counter added for each sensor. The count is incremented each time channel calibration values are written to the instrument.
1.29	25Jan02	1 Enhanced units processing to add strain units
		2 Enabling of Technical Diagnostic Features moved from About/Settings... dialog box to ini file.
		3 Added undersampling warning whenever frame rate is less than 10 times any filter setting.
		4 Added support for high speed RS485 cards.
		5 Changed strip chart to be enabled when ICU is started.
1.30	11Feb02	1 Corrected IRIG Frame Byte Ct in Telemetry report
		2 Corrected reporting of commutation count in Telemetry and TMATS reports when subcommutation is used
		3 Added 3Mb/s transmission rate
		4 Added channel move by right clicking on tab name
1.31	27Feb02	1 All prefixes (SI, PCM, and MEAS) removed from serial numbers in TMATS output
		2 File names generated by ICU changed from 10 character serial number to 3 character id followed by low 5 digits of serial number. For 65210A the id is 'IMS', for the 65210A Strain the id is 'AEX'. For example a calibration report for 0990A00039 will be named IMS00039.rc.
		3 Extension for TMATS report changed from .rt to .txt
		4 Extension for telemetry report changed from .re to .rt
		5 Extension for High Speed Acquire changed from .txt to .csv
1.32	08Apr02	1 Added additional significant digit to frames/sec display
		2 Added ability to set bits per IRIG word
		3 Added optional serial number and pad bits words to IRIG frame
		4 Updated TMATS report to support new IRIG features

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1.33	16Apr02	1 Added user settable Unit ID which is prefixed to TMATS channel names
		2 Added units conversion measurements to Configure mode
		3 Force channel to unity gain in Calibrate if application settings incorrect
1.34	04Jul02	1 Added channel high limit (C-d\MOT3) and low limit (C-d\MOT4) to TMATS report
		2 Added yellowing of Range Hi and/or Range Lo backgrounds when setting causes clipping, tool tip text describes the clipping.
		3 Clipped measurements no longer added to the Measurement list
		4 Filter settings below 10X telemetry rate cause yellowed filter background
		5 Added title to strip chart frame
		6 Message boxes now are autosized for width
		7 Added user units conversion calibration to Configure mode
		8 In About/Setup, "Configuration File(s)" was changed to "Application File(s)" to match the "Application" button used to load these file(s).
1.35	21Jul02	1 Fixed report generator to not crash when channel configuration is illegal.
		2 Fixed Exit button to allow program to exit properly.
		3 Add check when changing channel name to make sure the new name does not duplicate an existing channel name or one of the reserved names: SYNC, CCTR, FCTR, CRC, SN, or PAD.
		4 Fixed bug which could duplicate the first letter when adding a new unit
		5 Work around Visual Basic default screen position to prevent ICU from starting up off screen
		6 Added printer name to print dialog
		7 Added name of file to file not found dialog in Activate Mode
1.36	22Jul02	1 Channel high limit (C-d\MOT3) and low limit (C-d\MOT4) in TMATS report moved to high limit (C-d\MOT1) and low limit (C-d\MOT2) per clarification of TMATS specification.
1.37	03Aug02	1 Check for and exclude "/" as channel name for TMATS compatibility
		2 Add automatic adjustment of output ranges when either the high or low range change more than 0.5% due to change in units conversion
		3 Fixed yellow clipping highlight to display properly after modal dialog
		4 Units Conversion Calibration added to allow measurements to automatically calibrate unit conversions
		5 Moved "ON" checkbox to be part of "Real-Time Stripchart" header

Rev	Date	Description
1.38	03Sep02	1 Fixed combo box update when instrument is changed without restarting ICU
		2 Restricted all IRIG words to at least 4 bits per IRIG-106
		3 Application date in instrument is now updated when writing in Configure mode, the existing (file) date is still used in Activation mode.
		4 Added DAC output gains and offsets to application report for instruments with DACs
1.39	09Sep02	1 Added support for new Startup delay feature
		2 Modified battery monitor to allow battery voltage channel to be added after it had been deleted.
		3 Added ability to write instrument when battery low is displayed and adv_features_enab is enabled. This allows an instrument to be corrected after the battery voltage calibration has been corrupted.
		4 Automatically set output units to sensor units with unit gain when channel source is changed and unit conversions are no longer valid to ensure that units conversions are always valid.
1.40	16Sep02	1 Fixed potential crash when telemetry report was requested after adding channels in ICU but not writing new configuration to instrument.
		2 Modified P-1\IDC3 and P-1\IDC4 to identify the active counting bits in the subcommutation counter in the TMATS report.
1.41	30Sep02	1 Add ability to output NRZ-L, BIPHASE-L, RNRZ-L and RBIPHASE-L formatted telemetry in High-Speed Acquire Mode on RS485
		2 Browse added for data directory in About/Setup dialog box
1.42	16Oct02	1 RCAL enable added for instruments which support this new feature
		2 Automatically clear startup delay when going into CAL and ACTIVATE
		3 Added recommended limits to Range High and Low tool tip text
		4 Units conversion now ignored when RCAL or ZERO source selected
		5 Removed undersampling warning when RCAL or ZERO source selected

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1.43	31Oct02	1 Advanced Set Defaults now uses sensor limits instead of possibly incorrect DSP limits
		2 Added change info to calibration report
		3 Added generation of additional calibration file which only contains the last calibration data.
		4 Removed bogus error message generated by an ID channel in calibration.
		5 Added progress bar during read of instrument configuration
		6 Removed generation of temporary file "appsave.tmp"
		7 Added calibration certificate number to calibration report
		8 Enhanced file lists to reduce network traffic
		9 Fixed Set Defaults to preserve all calibration info when requested
		10 Fixed units generation to not generate invalid unit configurations
1.44	15Nov02	1 Fixed bug which reported current calibration level incorrectly
1.45	03Jan03	1 Added check to prohibit linking a sensor's units to a sensor specific unit type for a different sensor. The existence of such a link is illegal and in some cases made it impossible to exit the units edit dialog box
		2 Fixed bug which ignored edits when all units definitions were deleted from the units edit dialog box
		3 Fixed ICU to not crash when channel source is set to be another channel
		4 Added dialog box to warn user when a change to a channel's source causes the channel units to become invalid
1.46	07Jan03	1 Fixed to not crash ICU in rare case when single record overflows the log
		2 Enhanced ICU work around of Windows bug which does not initialize RS232 ports correctly on some PCs (mostly portables) to handle all versions of 65210A hardware
1.47	27Aug03	1 Fixed to not crash ICU when a Unicode language is the system default.

Rev	Date	Description
2.00	1 Dec 03	1 In High speed acquisition mode the data is no longer plotted if the CRC is bad.
		2 Added ability to double click on graph to create and add/subtract traces of a separate re-sizeable graphic window. Also converted stripchart to have X intervals ticked in 1 second increments.
		3 More detailed tooltip help text for power-up delay setting
		4 Added Supercomm to telemetry options
		5 Changed RS485 mode to use standard syncs, not special frame counter.
		6 Added average channel rate to telemetry report
		7 Added check that DSP Rate is $\geq$ fastest channel repeat rate
		8 Fixed bug that caused program error when setting channel source to another channel for Platinums
2.01	15 Jan 04	1 Added Minimum ICU Rev to application data. This prevents older versions of ICU from reading and corrupting App data settings from newer versions.
		2 Added the ability to change the stripchart trace colors.
2.02	23 May 04	1 Added T-1/RF5 Total Carrier Modulation to TMATS report. Changed T-1/RF2 to use equation: $BW = 3.86 * CarrierDev + .27 * BitRate$ (IRIG 106) for RF Bandwidth estimate
		2 Fixed Bug: RCAL was inverted when source is inverted
		3 Changed print report to not paginate when printing to file
		4 Added Receive Telemetry mode
2.03	27 Jul 04	1 Added Alignment data, and support for 35203AG1
2.04	10 Aug 04	1 Fixed Bug in channel tabs so long names cause scroll arrows not mutiple rows of tabs.
2.05	14 Jan 05	1 Added 65210E support.
		2 Made defaults for unconfigured channels consistant and not dependant on previous values. Defaults for unconfigured channels may change the first time this revision is used, causing the "write values to instrument" button to be yellow, even though no configured channel has changed.
		3 Changed the way PAD bits work for supercomm. For Supercomm PAD bits are placed after every group of repeated channels to increase the IRIG telemetry time so the DSP can complete a cycle.
		4 Removed dashes from App and Cal Dates

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2.06	15 Mar 05	1	Tuned ICU to work with Fastcomm 422/2 PCI-335 Card at up to 3Mb/s
		2	Added 2b Script to Application Report
		3	Fixed bug when changing RS485 address
2.07	15 June 05	1	Changed references to IRIG to Telemetry.
2.08	5 Oct 05	1	Added Data Delay support for 65210E
		2	Added "OUT HIGH" and "OUT LOW" to Aux Pin options
		3	Added support for 2bScript to be entered using ICU
2.09	30 Nov 05	1	Added support for 65210A without transmitter option
2.10	8 Feb 06	1	Modified to work in European locales that use comma for decimal point. Note: internal data always uses period for decimal point (US locale)
2.11	17 Mar 06	1	Changed App file to include RCAL value in user units. When reading app files created with Rev 2.11 and higher, the RCal value in user units is used, not the RCal hex value that was use in prior versions. If .app file was created by and older rev of ICU, the hex value is used as before.
		2	Added support for Type 2 transmitter (2304 to 2400 MHz) Removed transmitter frequencies from .ini file.

Rev	Date	Description
2.12	02 Jan 07	1 Added support for the AUX line as a digital input on 3520xA products with appropriately upgraded firmware; this allows the AUX wire to act as an input signal for capturing triggers or other control information that may be relevant to a data set.
		2 Improved serial interfacing to support a more devices: <ul style="list-style-type: none"> <li>a. Now include a brief sleep when polling; allows some devices to operate and also slightly improves performance.</li> <li>b. Added a work-around for serial interfaces which do not support BREAK control. ICU now send zeros at 110 baud when BREAK is found not to be working.</li> <li>c. Now checks for COM ports up to 16 (previously stopped at 8).</li> </ul>
		3 Changed for more rapid initial display of form when ICU starting up. The application file list is now only loaded when drop-down occurs, as opposed to loading each time ICU starts. When the app file list is loaded, a progress bar is now displayed so that progress can be shown in cases where a large number of files exist or the server may be slower.
		4 Changed application report to allow longer channel names while retaining column alignment. Also changed prefix names to allow improved column alignment: Master Clock Freq ---> Master Clock Telemetry Settings ---> Telemetry Telemetry Encoding ---> Encoding
		5 Fixed bug cutting off lower edge of main form under Windows XP.
		6 Now always allow writing application configuration to 65210A/E even if battery is low. These is required to allow the addition of the battery voltage channel if it had been previously removed.
		7 High speed acquire operation now displays progress bar in center of screen, as opposed to below high-speed acquire button.
		8 High speed acquire operation now prompts for name of each output file so they can be easily be named as needed for different tests.
		9 High speed acquire operation now automatically loads newly acquired data file into DVP (Data Viewer and Processor) at end of acquisition when DVP program is found in ICU application directory.
		10 Calibration mode now sets channel filters to 2.5Hz rather than 100Hz.. This provided slightly improved results since measurement sample rate is approx 10Hz when measurements collected and averaged.
		11 Changed COM port init. code to list all available serial ports without opening any of them. This avoids activating an ill-behaved driver.
		12 Added support for custom telemetry configurations, allowing full use of the telemetry processor.

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2.13	02 Apr 07	1 Improved ability to terminate high-speed acquire by using low baud transmissions on interfaces that do not support break.
		2 Fixed bug where user units table does not pop up unless units tabel entry is a link.
		3 Now determine available COM ports from registry rather than trying to open each port, which can be time consuming or may activate drivers which are ill-behaved.
		4 Added support for custom-programmed telemetry to be done with assistance from Summit Instruments.
		5 Fixed small bug which erroneously flags insufficient DSP speed when using telemetry sync.
		6 Added logic to set the minimum ICU revision based upon options that the user has selected. This allows the newest version of ICU to interact with an instrument that was configured with a previous ICU version, only forcing the minimum ICU rev to be changed if the user selects an option that requires a higher version.
		7 Updated to improve SI logo display with Windows XP.
		8 Added support for 35200B, 25200B, 15200B, 35203B, 25203B, 15203B, and 35203AG2.
		9 Added multiple methods for stripchart in cases where PC hardware does not function properly.
2.14	30 Jan 08	1 Added support for Delay CH (replaces Delay TM in units which support new delay mode). This is a newer more flexible delay feature whereby channels may be delayed within the DSP and current and delayed channels may be encoded into the same telemtry stream for improved redundancy and immunity to dropouts.
		2 Added improved color log display.
2.15	26 Feb 08	1 Fixed so scrollbars appear on new log when text fills up box.
		2 Converted to non-color log when Windows NT to prevent crash.
		3 Log changed to ensure bottom-most text always displayed after add.
2.16	04 Dec 08	1 In certain situations where channel gain is zero, program detects condition and does not abort.
		2 Added support for AUX pin to function as a digital input for 65210A's with 03 Dec 08 firmware which includes this feature.

Rev	Date	Description
2.17	27 Jan 09	1 Added stripchart enable control in About/Setup dialog. Since stripchart requires data acquisition, this prevents timeout and disconnect in certain (very rare) instrument configurations where data acquisition is disabled.
		2 ICU revision no longer shown in title bar. Allows more room for other annotations.
2.18	15 Apr 09	1 Enhanced battery monitor to correct for temperature effects on the battery when the T1 (internal temperature) is configured. Also, estimated time remaining is displayed if the IB (battery current) channel is configured.
		2 Application files are now sorted in the <b>File (app)</b> list box.
		3 Added selection <b>OUT TM CLK</b> (outputting telemetry clock) to <b>Aux Pin</b> function list for instruments that support that feature.
		4 Fixed a bug when instrument read errors would prompt for a retry, and did not force a retry.
		5 Improved <b>Set Factory Defaults</b> to more completely setup all instruments.
		6 Now flag <b>Filter 3dB Cutoff</b> in pale yellow background when set above the inherent sensor bandwidth by more than 1%.
		7 Added <b>Oversampling Warning Limit</b> in <b>About/Setup...</b> that allows for the configuration of the oversampling rate (ratio of telemetry rate to channel <b>Filter 3dB Cutoff</b> ). Previously this was fixed at 10X.
		8 Positioning of larger graph when double clicking on stripchart is now placed aligned with main form.
		9 Control box to close battery monitor is now added to battery monitor.
2.19	27 May 09	1 Corrected bug that prevented <b>OUT TM CLK</b> option from being visible when localization was other than US English. Version now works correctly in foreign localizations.
2.20	03 Jun 09	1 Added checkbox in <b>ABOUT/SETUP...</b> labeled as <i>Normal high-speed acquire termination (uncheck for testing only - reverts to checked on startup)</i> . This option allows for diagnostic testing of high-speed acquire when RS-485 may not be properly terminated which may cause high-speed acquire to terminate prematurely.
2.21	06 Jul 09	1 Added command button labeled <i>Run Utility to Post Process High Speed Data...</i> in <b>ABOUT/SETUP...</b> to allow post-processing of binary data files collected in high-speed acquire.
		2 Revised file open processing when overwriting files to delete file before opening for write. This prevents excess disk usage due to the fact that binary files are not truncated when a smaller data amount is overwritten onto a larger file.

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2.22	07 Aug 09	1 Added <b>Stream RS-485 on powerup</b> checkbox in telemetry section of main form. This option always defaults to OFF independent of whether the instrument is configured for this or not, thus will default to turning off this option. This option allows for more automated data collection.
2.23	08 Apr 10	1 New Features Added: a. Added pinout table report for signal conditioning modules (SCM's). Report is added to manufacturing report for 65210E instruments, listing signal names, connector, pin, and wire color codes. b. Added support for <b>CRC-8</b> in <b>Telemetry</b> configuration under <b>CRC</b> list box, available on some newer instruments. Eqn is $X^8 + X^2 + X + 1$
		2 High-speed acquisition enhancements: a. Now support files greater than 2GB (was 32-bit limitation) b. In post-processing, improved speed and GUI responsiveness. c. Added <b>Process BIN to CSV While Acquiring</b> in <b>About/Setup...</b> d. Enhanced displays for post processing data via <b>About/Setup...</b> menu. e. Saves folder used for high-speed acquire post-processing in <b>.ini</b> file. f. Now light <b>Stop Processing</b> button in yellow in post-processing dialog. g. Fixed bug sometimes causing error reading last 1024 bytes of <b>.bin</b> file. h. Added control to disable saving of <b>.bhx</b> files ( <b>About/Setup...</b> dialog) i. Added control to enable launching DVP after high-speed acquire completion ( <b>About/Setup...</b> dialog). j. Index counter in CSV files increased from 7 to 10 digits.
		3 RMS measurement enhancements: a. Fixed formatting to add one space on RMS measurement log b. Changed to read " <b>ACV</b> " c. Added RMS button to main tab d. All channels now are logged, non-selected channels in grey e. Disabled channels logged "Disabled from Telemetry" and not 0V. f. High-speed acquire files used now have "_rms" added to filenames. g. No longer invoke DVP (if installed) when RMS measurement. h. Added ability to perform RMS measurements in <b>Calibrate</b> mode with results returned in counts units.
		4 Misc Bug fixes: a. Now update <b>File(.app)</b> file list when changing the <b>Data Directory</b> in <b>About/Setup...</b> b. Added polling for COM ports if failure to open registry to get port info. Failure is possible on some systems with certain privilege settings where error code 5 (access denied) occurs. c. Changed formatting of RCAL specifier in <b>.app</b> files to use 6 digits to prevent caess where sometimes resolution is reduced. d. Removes redundant commas in CSV files that could sometimes occur when channels disabled.
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Rev	Date	Description
2.23	08 Apr 10 (cont'd from prev pg)	5 Misc Cosmetic Improvements: a. Changed <b>RS485 Address</b> and <b>File(.app)</b> file list to use smaller fonts to allow more visible characters. b. Increased logging speed using new algorithm. c. Increased form width for entry form, useful to display filenames with long paths, such as often needed during high-speed acquire. d. Revised colors and made consistent for NOTE, WARN, PASS, FAIL. e. Improved entry dialog with 2 buttons by centering buttons together.
2.24	12 Apr 10	1 Reduced displays by 6 pixels vertically so that all windows fit on 800x600 displays. This accommodates newer Windows XP, Vista, and Windows 7 windows schemes that use slightly wider title bars.
2.25	12 May 10	1 Fixed bug causing instrument lockup when trying to start high-speed acquisition. This bug was introduced in ICU version 2.23(5b) by the logging improvements, which unexpectedly caused servicing data acquisition in the middle of high-speed setup.
		2 Fixed bug positioning progress bar on screen for high-speed acquisition. This bug was introduced in ICU version 2.24 due to an accidental conversion to pixels in reconfiguring frame sizes.
		3 Added page number in parenthesis on <b>Next Page</b> command button in <b>Telemetry</b> configuration section.
2.26	13 Jul 10	1 Added 85208A FZU load SCM pinout support.
		2 Improved margin for DSP register settings to allow them to be recognized as unchanged after application parameters are processed to accommodate filter, gain, cal, etc. Fixes minor bug where the 'write' button is illuminated in yellow unnecessarily.
		3 Added 65210A and 65210E support for type 3 transmitter table handling both upper and lower s-band with IRIG compliant 1 MHz channel spacing.
		4 Fixed bug when reading .APP files where minimum ICU rev in file was compared to the minimum ICU app variable rather the actual running revision of ICU.
		5 Now added support for RF transmitters with automatic bit rate. (manufacturing code XI now allows zero frequency deviation and zero premod filter; when zero is specified, ICU now determines these parameters automatically from current bit rate, assuming the transmitter does the same). A zero FM deviation value also limits encoding to RNRZ-L along with RS-485 available for direct wired computer data acquisition.
		6 Added support for FM transmitter minimum bit rate (added to mfg block 'TI' command). Allows minimum bit rate when transmitter requires it.

2.27	04 Feb 11	1	Added support for 32-bit frame id (FCTR), including drop-down selection and custom programming support.
		2	Added output of .HDR file along with .SET file. Allows post-processing of .DAT files, which are binary files of high-speed telemetry data collected through mechanisms NOT using ICU. These files do not have headers which describe how to decode their data. The .HDR file provides decoding information needed to process these binary files.
		3	Added .DAT file option to high-speed file post-processing. A .DAT file is a binary file without an embedded header, thus a .HDR file is used to interpret the binary file.
		4	Fixed bug that caused ICU to crash in certain instances when there were pending changes and the ST or RCAL checkbox activated.
		5	Added ability to post-process NRZ-L binary data files. NRZ-L files have each byte with MSB first (while RS-485 files have bytes with LSB first).
		6	Added support for 85209A 4-ch 10k Thermistor/Switch/5V input SCM
		7	Revised S/N item selection in telemetry to use any bit width and S/N is now truncated even if number of bits needed would be greater than field width specified (previously did not allow widths less than that required for serial number).
		8	Added button to set default telemetry in custom telemetry setup.
		9	Changed frame counter description on telemetry report to have power of 2 notation rather than actual number.
		10	When channel or telemetry delay is specified, it is now included in TMATS report as a comment (there is no other official provision for this information in the report).
		11	Changed order of special telemetry items: WAS: Frame Counter, Serial Number, Pad, CRC NOW: Serial Number, Pad, Frame Counter, CRC Note: This change will cause 'Write value to Instrument' to come up yellow on an old instrument even when no changes are to be made.
		12	Changed High-Speed Acquire to that channels not included in telemetry are simply not listed rather than listed as "OFF". Final CSV header now also lists CRC.
		13	Added ability to properly decode two adjacent nybble words in high-speed telemetry stream (previously data needed to be multiples of 8 bits).
		14	Improved checking of supported instruments and operator display upon connection.
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<b>Rev</b>	<b>Date</b>	<b>Description</b>
2.27	04 Feb 11 (cont'd from prev pg)	16 Added support for 35207A and 35201A.
		17 Bug fix in battery monitor to check for non-zero current. This prevents a division by zero error when calculating estimated time left. Error occurs only when channels are being reconfigured in significant ways.
		18 Fixed bug where channel being switched to from an inverted channel will have its RCAL value display corrupted.
		19 Now allow up to 40 channels in post-processing. Previously was set to match DSP limit of 16-channels. This allows processing of supercommutated data.
		20 Post-processing data file and .HDR file names are now saved to INI file. This simply allows program to remember these as a convenience.
2.28	23 Feb 11	1 Bug fix when spawning programs due to spaces embedded in the paths in file names. This affected simultaneous processing of high-speed files and launching of DVP program for post-processing analysis.
		2 Cosmetic change to shrink height of high-speed post-processing form to match that of ICU.
		3 Now spawn a copy of actual running ICU version when simultaneously post-processing. Previously, spawned ICU.EXE even when running a beta version.
		4 Changed stripchart pixel clear operation to a version that operates on more displays. Affects some graphics accelerators, primarily on laptops.
		5 Added a pre-filled combo box for HDR files on high-speed post-processing menu. Previously only a text box was provided and the user had to type the entire path and file name of the HDR file.
		6 Fixed bug at end of post-processing of high-speed data when channel count was greater than 16 channels.
		7 For 65210A/E/ES, battery monitor now adjusts for slight change in voltage when RF transmitter is turned on or off. This change is due to battery series resistance, protection circuit, and measurement shunt.
		8 Added support for 35208A.

<b>Rev</b>	<b>Date</b>	<b>Description</b>
2.29	12 Sep 11	1 Logo changed to Spectrum rainbow.
		2 Added support for 32-channels and twice the DSP rate for instruments that support it.
		3 Fixed an annoyance where channel currently selected keeps shifting when menus are refreshed. Display is now more stable when channel tabs extend beyond end of screen.
		4 Fixed bug where <b>TMATS</b> channel delay under <b>G\COM:</b> (comment) is annotated for channel delay rather than telemetry delay.
		5 Added checkbox and pop-up to display tilt for <b>A1</b> , <b>A2</b> , and <b>A3</b> axes.
		6 Fixed bug where position of battery monitor and tilt dialog are now maintained even when forms not displayed. Thus when re-displayed they remain at same position.
		7 Added note to password box listing default password.
		8 Added <b>Legacy Tm Item Order</b> to <b>Setup...</b> form. This allows selection of the item order in telemetry frames: Legacy: <b>FCTR, SN, PAD, CRC</b> New: <b>SN, PAD, FCTR, CRC</b>
		9 Added automatic generation and writing of each individual settings file to data directory when <b>.SET</b> file is written. These are all places in a subdirectory called <b>SET</b> .
		10 Fixed a bug that ensures <b>ICU</b> unloads from memory when terminated.
		11 Fixed cosmetic bug that ensures longer message are not cutoff in dialog box.
		12 <b>HDR</b> files written to decode telemetry data now include a header when custom telemetry is enabled.
		13 Added support for "Z" code <b>SCM</b> card (85203B)
		14 Added log of instrument cal age when connecting. Logged in red when age is greater than 1 year.