

MiniPulse Release Notes

Released: July 12, 2004

New In Version 4.a.1

This is an all new version with many changes, visible and hidden.

Warning: This version will not work with configuration files and gun type files used by previous versions of MiniPulse. You must therefore know the settings and gun types that you are using. To aid in this, it is advisable to take a printout of the system configuration before upgrading to this version. Always backup the currently installed files!

Note: This version requires that you register the software before it can be used. To do this: install the software on the working machine. When you run the software for the first time you will be presented with the registration dialog, make a note of the machine identifier and send it to PopTech. You will then be issued with a unlock code.

This version requires HP150R firmware version 3.c.1 or HP200X firmware version 1.h.5.

Version History

Version 4.a.1

- ▶ Docking Views: All views now have the ability to dock to the sides of the main frame or each other. In addition any view that is docked can be set to 'Auto-hide' which will hide the view when it is not in use.
- ▶ New Resource Property View: This view will allow instant control of any resource attached to the system. All parameters associated with a particular resource are displayed. Any parameter that can be change within the operating mode of the system can be changed and the hardware updated immediately.
- ▶ Improved Use Of Screen Real Estate: Due to the use of docking, tabbed and grid views the amount of screen real estate used for view frames and OS clutter has decreased and has allowed more space for essential information.
- ▶ Online Dynamic Help: This pane provides online help to provide assistance in the use of most of the features within the system.
- ▶ New User Messenger: This feature provides a means of communicating between the slave nodes on a multi-slave system. Users can send textual messages to each other over the network radio link
- ▶ Tabbed Views: All views can now be overlaid by other views and each one can be selected by clicking on the associated tab.
- ▶ Enhanced Soft Start (Mammal Friendly): The soft start feature provides a means of gradually increasing the fired volume from an initial low value to the full array gradually over any number of shots.
- ▶ New Hydrophone List View: This view shows the last 100 traces for a single hydrophone channel stacked one on top of the other. As a new trace is acquired and placed on the top of the stack the oldest one is pushed off the bottom.
- ▶ Hydrophone Data Written Directly To 'SEG Y' Format File: This saves time converting from the old 'phn' format to 'SEG Y' and means that there is no conversion errors.
- ▶ Visual Themes: Just to keep the operator happy, they can choose from a number of predefined visual designs.

Version 2.c.3

- ▶ A new host library has been added for the Geometrics acquisition system. This library includes data input from an external source (nav) that is appended to the gun data and sent as the extended header string.
- ▶ The 'Retries' under 'Configuration->Radio' can now be set to 0. If there is an error in the transmission of a data message when this value is set to 1 or greater, the message is retried that number of times. If however the Retries value is set to 0 the data message is still resent once unless the message is Sensor Waveforms, Hydrophone Waveforms and Depth/pressure data, in which case no retry is attempted. I have found that the system works best with a setting of 1 or 0 Retries and 0.4 for the 'ACK Timeout' value.

- ▶ A new function for the HydraPulse 150R system has been added to switch between two active slaves by pressing the 'Tab' key without the need to disarm the system.
- ▶ A software filter has been added to remove noise and spikes from individual hydrophone data channels.
- ▶ Corrected various memory leaks and potential programme failure points.

Version 2.b.3

- ▶ Corrected problem with Fire Pulse lengths greater than 25ms on 200X systems. Pulse Lengths greater than 25ms would roll round and thus 30ms would actually be 5ms.
- ▶ GCS90 communications emulation has been modified so that when the gun Reference is displayed in the Array Plan view the gun Reference is used as the gun identifier for the gun status data otherwise the gun Number is used.
- ▶ The Host communications is now available over a LAN. MiniPulse acts as a server and allows up to 5 clients at any one time. However only one client can be nominated to issue commands and firing information.
- ▶ The host communications icon has been reworked to give a clearer indication of data flow, to and from the host system.
- ▶ Corrected problems with both the 'Gun Select' dialogue and the 'Gun Swap' setup dialogue, both of which crash the system if there were no guns available to select.
- ▶ The Shot Peak Delta Offset had a problem whereby it's value would be the value of the last gun with a delta offset greater than 0.0. This has been corrected
- ▶ The communication dialogue has been reworked to accommodate the addition of the LAN information for both the host communications and the 2000X system communication.

Version 2.a.5

- ▶ Corrected problem with gun types in that if the file was not found and the user cancelled the open dialogue it was impossible to relocate the file or create a new one.
- ▶ Corrected problems with Offsets function display and hydrophone array display.
- ▶ Added *Data Tips* to Gun Sensor Array view to display significant information for items under the cursor.
- ▶ Added hydrophone and D/P information to configuration printout.
- ▶ Added dialogue item tips to assist in the configuration process.
- ▶ Corrected problem to 100PC version that incorrectly applied the manual 'Gun Delay' twice.
- ▶ Added the ability to adjust the manual 'Gun Delay' by pressing the left or right cursor keys in the single 'Sensor View', if the shift key is held while pressing the cursor keys the 'GI Delay' is adjust for GI guns .
- ▶ Corrected bad directory name for driver files generated by install system.

Version 2.a.4

- ▶ In this version the set-up wizard has been modified to make it simpler for the 150 system and corrected some anomalies with the items
- ▶ Corrected bug that when selecting hydrophone file in the 'General' tab would present a log file name.
- ▶ Configuration changes that involve images modification can now cancelled, that is they are restored to their previous state.
- ▶ Corrected bug in GCS90 gun header data library that produced data that did not conform to the specification.

Version 2.a.3

- ▶ This version is the release version for the HydraPulse 2000X system. It has been reworked to incorporate the functionality of 'Modules', this being the basic building block of the 2000 system. This version has only minor changes apart from the those mention above .
- ▶ Now supports the Extended Auto-fire Detector card and allows the setting of its threshold independently.
- ▶ Depth and Pressure channels associated with guns are now ignored when all those guns are set to either 'Standby' or 'Off' such as when a sub-array is disabled.
- ▶ Corrected problem that when changing the mode of guns within a sub-array the whole array would be changed.

Version 1.p.1

- ▶ The addition of a new log file record that stores accumulated data of a survey line which can then be viewed and printed out using the Utilities application. The data stored includes Depth readings, Pressure readings, Shot Delta Error values, Shot Standard Deviation, Shot Delta Spread values, Gun Delta Error values, Gun Standard Deviation and Gun Delta Spread values. As a result of this addition Version 3.7a of the Utilities is required to read this new record. For this function to work at least one log file option must be enabled.
- ▶ Corrected a bug affecting the Monitor communications that would cause the serial communications to give frame overrun and checksum errors.
- ▶ Rework of the SOL dialogue so that it fills the log and phone filenames in more intuitively. That is that if the option to open a previous file has been selected the filename remains unaltered when the Line Name is entered, however, if the open previous file option has not been selected the filename will reflect the Line Name with

spaces translated to the underscore character.

- ▶ Added password capability to the user selection dialogue. This allows users to protect their personal settings.
- ▶ Added new diagnostic function, 'Walk The Guns', to ease the automatic sequencing of the guns or the random selection and firing of individual guns.
- ▶ A bug that in certain conditions would cause the gun(s) to freeze has been removed. In addition the smoothing settings have been simplified with the use of slider controls to set the Attack/Decay and the Rate values. This modification requires HP200X ver 2.e.3 firmware.
- ▶ Data tips for Offset History and Firetime History windows.

Version 1.n.2

- ▶ The addition of a depth limit alarm. As a result of this addition there is a new log file record for depth and pressure when either is out of specification. Version 3.5b of the Utilities is required to read this new record.
- ▶ Corrected a bug affecting the sensor display on the Monitor station in that if the gun was not found such as if the sensor was inverted, the sensor was not displayed.
- ▶ There is now an option to update all defined guns with changes made to the gun types.
- ▶ Gun References must now be unique within each sub-array and if a change is made to a gun reference so that it would be the same as one of the other guns in the same sub-array, the two references are swapped.

Version 1.m.1

- ▶ Gun Life data is now stored in the controller on 200 systems. This makes the readings more accurate with the life of the gun.
- ▶ Depth and pressure channels are now fully objected which means that any transducer port can be associated with any channel and each channel has its own calibration offset.
- ▶ Added dialogue to aid in the set up of automatic gun swapping.
- ▶ Revamped the gun selection dialogue.
- ▶ New capability to start and stop survey line mode from a remote source when the GCS90 library is installed..
- ▶ Added ability to print configuration.

Version 1.k.1

- ▶ Added new function to measure the sub-array offsets. This is achieved by firing a single gun on one sub-array and monitoring a hydrophone on another. By measuring the time between the gun being fired and the result at the hydrophone, the distance between them can be calculated and therefore the offset. The new function carries out the above procedure automatically, logging the results with each hydrophone ready for printing.
- ▶ Corrected problem with flip-flop operation.
- ▶ Removed bug in the routine to add a gun images.
- ▶ Corrected problems with telemetry system when the cycle time is lower than the total transmission time.
- ▶ Added option to select data items in *Gun Information* view, by clicking on *Select Items* from the views system menu.
- ▶ View edges now have magnetic properties to aid in the arrangement of the display.
- ▶ Reworked *Preference* dialogue so that it now displays the information as a property sheet with property pages.
- ▶ Corrected minor problem with *Gun Properties* dialogue which would update gun with old data.

Version 1.j.1

- ▶ Change *Depth* and *Pressure* histogram views so that update is quicker.
- ▶ Added grid to *Depth*, *Pressure* and history views.
- ▶ Reworked gun and hydrophone icons in tree lists.
- ▶ Added *Data Tips* to most views to display significant information for items under the cursor.
- ▶ Added control over the speed of the serial link between the controller and the MiniPulse adapter. This required a new release of the mp2ntdrv.dll, but the software is backward compatible.

Version 1.h.1

The only significant new feature in version 1.h.1 is the addition of the I/O routines to interface to the 200X controller via a serial link. The controller software must be upgraded to work with MiniPulse and must also have hardware added to connect the MiniPulse software to COM1.

- ▶ Added *Big Numbers* view which displays shot number, file number and supply pressure in a large font.
- ▶ Reworked main function buttons so that when they are activated they change colour.

Version 1.g.1:

- ▶ Changed Sensor Array view so that the guns are displayed in sub-array format.

Version 1.f.1:

- ▶ Added Host communications *Data Scope*. This view is useful for solving problems with the extended header data and navigation control strings.
- ▶ Added unique and configurable sound for each event and error item.
- ▶ Added view edge auto-alignment function.

Version 1.e.1:

- ▶ Added *Soft Start* and *Noise Record* functions.

Version 1.a.1:

- ▶ First public release of MiniPulse.

Known Bugs

Contact Information

If you have any questions, comments, suggestions, or bug reports for PopTech's MiniPulse, contact stuart@hydrasystems.co.uk. When submitting bug reports, please include at the very least the following information:

- ▶ Operating system and version you're using (i.e. Windows 95 build 1111)
- ▶ Version of MiniPulse you're using (i.e. 1.h.1)
- ▶ What error message(s) (if any) you get
- ▶ Any other information you think would help in tracking the error down