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# Addendum to PsiLog User Guide

Printed User Guide: V1.19F  
Addendum: V1.30F

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## ***Introduction***

This Addendum documents the changes made to the PsiLog package since the V1.19F User Guide was printed.

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## ***Summary of Changes***

The changes made to each version of the PsiLog software are detailed below.

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### ***V1.29F to V1.30F***

- Getting of scheme names for selection to transfer to the Psion is twice as fast.
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### ***V1.28F to V1.29F***

- Added support for no unload number in the name of exported data files.
  - Reselects the telemetry switch relay (if applicable) when the communications times out and the RTS signal is toggled. Previously, the RTS toggle would cause telemetry switch relays to disconnect from the data logger.
  - Corrected vertical axis scaling in the Velocity Trace.
  - Corrected a "divide by zero" error in the Velocity Trace.
  - Changed references to "scsoftware.com.au" to "scss.com.au".
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### ***V1.27F to V1.28F***

- Lotus 1-2-3 export now works and is three times faster.
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### ***V1.26F to V1.27F***

- Can export unload files as text (tab or comma delimited) or Lotus 1-2-3 worksheet (WK1) files directly to the PC.
- Improved X-axis labelling slightly.
- Fixed a memory corruption problem which resulted in occasional "Program exit code 37" crashes.
- Now correctly times out the logger buffer viewer function if no logger is connected.

- Plot date/time range window now updates to correct values after cancelling a zoom.
  - Added checks to ensure only one copy of PsiLog can run at once.
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### **V1.25F to V1.26F**

- Fixed failure to transfer multiple unload files belonging to the same scheme to the PC.
  - Fixed blank lines added to V3 unload index files.
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### **V1.24F to V1.25F**

- Fixed intermittent “Invalid arguments” error upon exiting PsiLog when in the Data Viewer mode, or when switching from the Data Viewer mode to a different mode.
  - Fixed “String too long” message when there is not enough memory to allocate the communications buffer.
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### **V1.23F to V1.24F**

- Performance improvements to the Data Viewer plot view (now nearly twice as fast in most cases).
  - Plot ranging now shows a percentage progress.
  - Data Viewer “Find date” is much faster (practically instantaneous in many cases).
  - Data Viewer tabular view now correctly calculates the values of channels using formulas that depend on the results of calculations involving other formulas.
  - Data Viewer plot view no longer intermittently shows a shaded area when zooming out.
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### **V1.22F to V1.23F**

- Performance improvements to the Data Viewer plot view.
- Improved selection of log entry to plot.
- Improved X-axis and Y-axis scaling and labelling in the Data Viewer plot view.
- Gridlines are now optionally available in the Data Viewer plot view.
- The Data Viewer plot view now correctly calculates the values of channels that use formulas that depend on the results of calculations involving other formulas.
- The Select Unload dialog now leaves enough room to properly display characters with descenders (like the letters ‘g’ and ‘y’).
- The Select Unload dialog now allows key presses to jump the highlight to files starting with the key’s character.
- Minor user interface improvements.

**V1.21F to V1.22F**

- Fixed incorrect date/times in unload files when performing incremental unloads of schemes using linear (stop when full) buffers.

**V1.20F to V1.21F**

- Fixed incorrect date/times in Starlog Version 2 unload files of schemes using linear (stop when full) buffers.
- Fixed “ENT:Procedure not found” message in Data Viewer.
- Fixed Buffer viewer in Data Viewer not always detecting changes to the log buffer and hence not automatically updating.

**V1.19F to V1.20F**

- Fixed transfer of unload data to Starlog Version 2 software.
- Removed “Loading CDTDone” message when programming loggers.
- Improved speed of transfers of unload files to PC.

**Changes to the PsiLog User Guide**

On page 24, the paragraph:

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If the status shows COM port in use, then another program is using the serial port. If the Port setting is correct you will have to determine which program is using the serial port and exit it. You will then have to either exit and restart PsiLog Link, or click on the Setup... button and click OK.

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Has been replaced with:

The following table covers the status messages you're most likely to see:

Status message	Description
Attaching to engine	You may see this message appear briefly when starting PsiLog Link or when disconnecting the cable between your Psion and your PC.

COM port in use	Another program is using the serial port. If the Port setting is correct you will have to determine which program is using the serial port and exit it. You will then either have to exit and restart PsiLog Link, or click on the Setup... button and click OK.
Connecting	The cable is OK and the COM port is correct, but your Psion and your PC are not yet linked together. You will see this if you connect your Psion to your PC, but are not actually transferring files. If you attempt to transfer files, but still see this message (and the transfer fails), make sure you have selected the same baud rate for both computers.
Copying system software	Some files needed by your Psion computer for the Link to function are being copied from your PC to your Psion. You should only see this the first time you connect your Psion to your PC after your Psion was reset (either manually or through lack of power).
Disconnecting	You may see this message appear briefly when you finish a file transfer or disconnect the cable between your Psion and your PC.
Failed	You may see this message if the COM port settings are incorrect, or if there is a communications problem between your Psion and your PC.
Linked	Your Psion and your PC are connected and transferring files.
No connection	There is no physical connection between your Psion and your PC. If the two computers <i>are</i> connected, it could be the cable is faulty, or you have selected the wrong COM port.

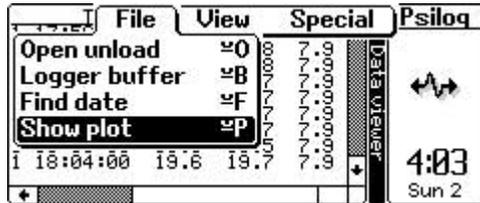
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The changes in V1.23F included many enhancements to the plotting function of PsiLog. To reflect the changes, the section "Viewing a plot" on pages 60-61 has been re-written. Read the following as if it replaces that section of the manual:

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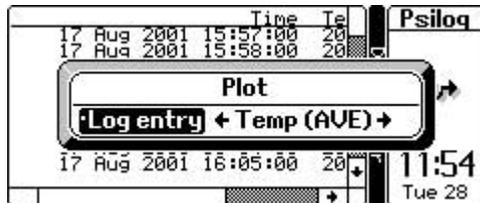
## Viewing a plot

To view a plot, select Show plot from the File menu.



If you get the message Can only plot unload files, then first make sure you are viewing an unload file. See *Viewing an unload* on page 58.

The Log Entry selection dialog will appear:



Select the log entry to plot and press Enter. Press Esc if you decide not to view a plot.

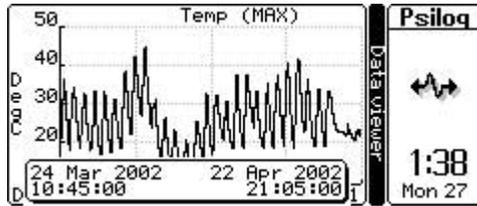
To return to the tabular view of the unload file, select Hide plot from the File menu.

Plotting can take a long time. PsiLog first has to “range” the data – determine the extremes of the data it has to fit on the screen – then actually plot the data. While PsiLog is ranging and plotting, the messages Finding ranges and Plotting are shown at the bottom left of the screen. You can press Esc to stop plot ranging and drawing. If you do stop the ranging or plotting, the undrawn portion of the plot will be shaded.

When you switch back to the tabular view, PsiLog will automatically position the data corresponding to the left of the plot at the top of the display.

## The Plot Display

Plots are displayed one log entry at a time and start out showing the entire unload file.



Pressing Tab will open the Log Entry selection dialog where you can select a different log entry to plot.

#### Gridlines

Gridlines may be shown corresponding to the tick marks on each axis. See *Preferences* on page 7 for the options for gridlines.

#### Date/Time Window

At the bottom of the above screen shot is a window obscuring the X-axis. This window shows the exact date/time of the range of data displayed. This window can be toggled on and off by pressing the / (slash) key or toggled between the top and bottom of the screen by pressing the Up/Down arrow keys.

When zooming it displays the start/end date/times of the highlighted area.

#### Title

The title at the top shows the name of the log entry, and the type of logging performed (maximum, average, etc).

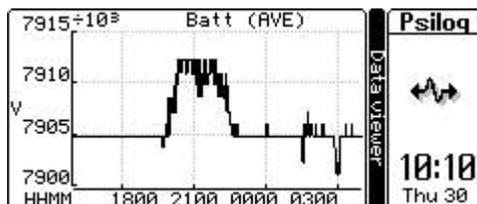
#### Y-Axis (Log Entry)

The Y-axis down the left side of the plot is automatically scaled to fit the data shown on the screen. The units are shown at the very left of the screen.

A screen shot below shows Y-axis label values that have been scaled. The “ $\div 10^3$ ” at the top of the Y-axis indicates that you must divide the Y-axis label values by  $10^3$  (1000) to get the true label values. The scaling value is always a power of ten. The power factor is always a multiple of three.

#### X-Axis (Time)

The X-axis across the bottom of the screen always shows the date/time. The following screen shot has the date/time window turned off, revealing the X-axis:



The X-axis is labelled in short form by only displaying the most significantly changing parts of the date/time. For example, if the range of times covers more than an hour (but less than a day), then hours with optional minutes and seconds will be shown.

In the above screen shot, the bottom left of the screen shows HHMM. This indicates the parts of the date/time shown on the X-axis. In this case, the HHMM signifies that hours and minutes are shown.

Between one and three parts of the date/time may be shown at each tick on the X-axis. For information on selecting how many parts to show, see *Preferences* on page 8. The available date/time parts are:

Date part	Description	Date part	Description
YY	Year	HH	Hour
MM	Month	MM	Minute
DD	Day	SS	Second

The context of MM determines whether it is referring to Month or Minute. If you're unsure, use the / (slash) key to toggle the more detailed date/time window.

The possible date/time short forms are:

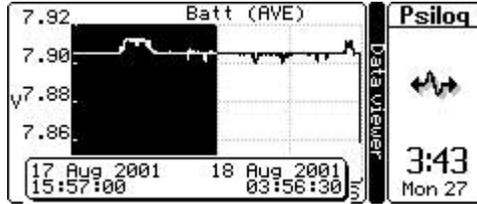
One part	Two parts	Three parts	Used when date/time range is...
YY	YYMM	YYMMDD	More than a year
MM	MMDD	MMDDHH	More than a month, less than a year
DD	DDHH	DDHHMM	More than an day, less than a month
HH	HHMM	HHMMSS	More than a hour, less than a day
MM	MMSS	MMSS	More than a minute, less than an hour
SS	SS	SS	Less than a minute

If PsiLog determines that the last (right-most) part is the same for each axis tick, PsiLog will shuffle the parts along to remove the redundant part and reveal a potentially more interesting part. For example, if the selected form is HHMMSS, but the seconds are always zero (because the axis interval step is, say, two minutes), then PsiLog will change the format to be DDHHMM.

## Zooming

It is possible to zoom in to a section of the plot to see the data in more detail. When zooming, PsiLog always displays the entire unload file and highlights the currently selected section. The + key shrinks the highlight (zooms in). The - key expands the highlight (zooms out). The Left/Right arrow keys move the highlight left and right.

The date/time window (when visible) shows the date/time range of the highlighted data



When the required area is highlighted, press Enter to redraw the plot with the selected data filling the screen. Pressing Esc cancels the zoom.

Pressing the \* (star or asterisk) key with the highlight active will cause the plot to zoom out so that the plot currently being displayed will fit into the highlight.

Pressing the \* (star or asterisk) key when the highlight is not active will cause the plot to zoom right out and display the log channel for the entire unload file (the starting view).

## Key Summary

Keys	Description
Tab	Change the log entry being plotted.
/	Toggle the date/time window on/off.
Up/Down arrows	Toggle the position of the date/time window between the top and bottom of the screen.
+/-†	Shrink/expand highlight (zoom in/out).
Left/Right arrows†	Move the highlight left/right.
Enter	When zooming, redraws the plot with the highlighted area filling the plot area.
Esc	When zooming, cancels the zoom.
*	When zooming, zooms out so that the currently visible part of the plot is rescaled to fit into the highlight. When not zooming, zooms right out to show the entire unload file (the starting view).

†If not already zooming, these keys will activate the zoom mode (highlighting).

## Preferences

The Data Viewer Plotting preferences let you set options related to plotting:



Gridline options may be set individually for the X (time) and Y (log entry value) axes.

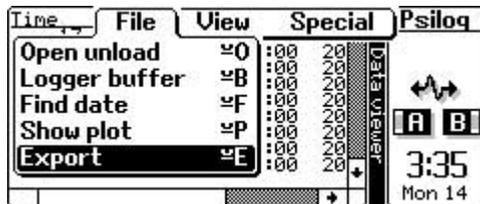
- **X axis labels** – One of One part, Two parts, or Three parts. This controls the size of the labels at each tick on the X-axis. Fewer parts result in shorter labels, and therefore more ticks (and gridlines) can fit on the axis.
- **Grid colour** – One of Off, Black, or Grey. If you are running short of memory, black is the preferred colour as using grey requires some extra memory.
- **Grid style** – One of Solid or Dotted. Dotted is the recommended style for use with the Black colour. Either style is good with Grey.

The changes in V1.27F included a new unload export facility. Read the following as if it follows immediately after the new “Viewing a plot” section above.

### Exporting an unload

Unload files can be exported by PsiLog in a variety of formats. Data is always exported to a specific directory, selectable via preferences.

Make sure you are viewing an unload file. You can be in either the tabular or graphical (plotting) modes. Select Export from the File menu.



If you are not viewing an unload file you will get the message Can only export unload files. If you are viewing an unload file, the Export dialog will appear:



This dialog controls how the unload data is exported. The dialog title shows the name of the unload file being exported. The name of the exported file is based on the unload filename, unload number, and the export Format. See *Preferences* on page 10 for more information.

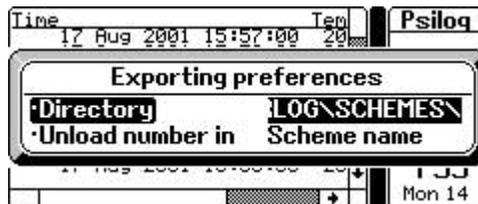
- **Range to export** – The Start/End date/time fields default to the entire unload if you were looking at the tabular view of the unload file. If you were looking at the graphical (plot) view they default to the range of data you were looking at.
- **Format of export** – The Format and Header rows... fields control the form of the export. Format can be one of Text (Tab) where the fields are separated by tab characters, Text (CSV) where the fields are separated by commas, or Lotus (WK1) where the fields are exported as a spreadsheet. Pressing the Tab key on the Header rows... field opens a sub-dialog where you can select how the header rows should appear (if at all). Each row can be set to None (the header row is skipped), Title (eg “Time”, “Temp”), Action (eg “RAW”, “AVE”), Units (eg “degC”, “mm”), Title(Action) (eg “Time(RAW)”, “Temp(AVE)”), or Title(Units) (eg “Time”, “Temp(degC)”).
- **What to export** – The Entries field controls whether all the logged entries will be exported, or just one particular one. The date/time is always exported.

Press Enter to accept the export settings and export the data. If the export directory is on your PC, PsiLog will connect to PsiLog Link (which must be running on your PC) and transfer the file.

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## Preferences

The Data Viewer Exporting preferences let you set options related to exporting:



- **Directory** – This is the directory all export files will be saved to. If it starts with REM: : it is a directory on your PC. Make sure PsiLog Link is running on your PC and the two computers are connected via a serial cable. The default is REM: : C: \STARLOG\SCHEMES\.
- **Unload number in** – This controls where the unload number is placed in the name generated for the export file. Scheme names can be up to eight

characters long. Extensions for the unload formats are TXT, CSV, and WK1. There is no more room for unload numbers without replacing part of either the scheme name or extension. If the unload file named ROOMTEMP. U01 was exported as a Text (CSV) file, then setting this field to Scheme name will result in the export file being named ROOMTE01. CSV. Setting this field to Extension will result in the export file being named ROOMTEMP. C01.