



EZcalPro features

- Diagnosis and configuration of PG Trionic controllers
- Built-in USB storage, SAVE, LOAD, PGFLASH functions
- See “EZcalPro Instructions” for primary use descriptions

EZcalPro advanced features

- SMART and LEGACY modes for EZcal
- Language translation localizes menu text
- QUICKLOG records controller data during operation

1.1 EZcalPro LEGACY & SMART modes for EZcal

The EZcalPro SETUP menu (see “EZcalPro Instructions”) has two settings for EZCAL MODE: LEGACY and SMART. This mode setting determines how the EZcalPro works when displaying controller menus (ie: what is seen when the EZcalPro is connected to a PG Trionic Inc controller without pressing ESC).

In the LEGACY mode, the EZcalPro works very similarly to the original EZcal hand held device; the device is “dumb” in that all displayed messages come from the connected controller – the EZcalPro simply acts as a display window, showing whatever the controller instructs it to do.

When a button is pressed on the EZcalPro, a message is sent to the controller; in turn the controller responds to the button and may change a setting or display different information.

The LEGACY mode is compatible with all PG Trionic Inc controllers.

In the SMART mode, the EZcalPro works like a computer running ASPCUST; the EZcalPro fetches menu descriptions and value data from the controller, and decides for itself what to display.

When a button is pressed, the EZcalPro decides how to respond to the button; it may change settings in the controller or display different information.

The SMART mode is compatible with most PG Trionic Inc controllers; however a few unusual controller features may not work as expected (for example “OVERRIDE” on GP102 controllers).

Why SMART mode?

There are four benefits to using SMART mode on the EZcalPro:

- Improved message scrolling
- Language translation
- Quick access to any menu display, rather than only to the HELP message
- Ability to set up QUICKLOG to continuously record controller data

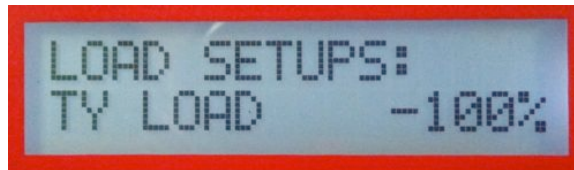
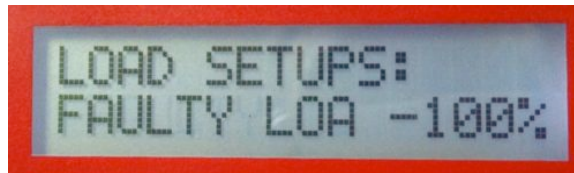


1.2 SMART mode enhanced scrolling

In LEGACY mode, scrolling occurs when the total characters of description / label and value exceed the 16 character limit of the display. The complete displayed message is scrolled, which results in sometimes being unable to see the desired value:



The EZcalPro SMART mode separates the displayed value from the description / label, and does not scroll the value – this makes it much easier to view or adjust the value:

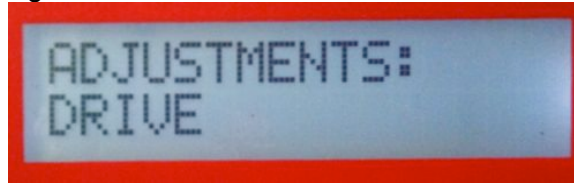


The EZcalPro SMART mode always tries to avoid scrolling the value, but sometimes that is not possible (for example if displaying a very long value such as platform tilt).

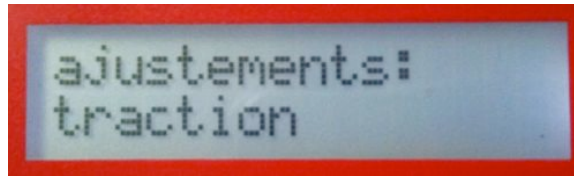


1.3 SMART mode language translations

In LEGACY mode, all displayed messages come from the controller, and are always displayed in English:



However, the EZcalPro SMART mode can translate individual English words and phrases so that displayed messages / menus / etc are shown in the users preferred language:



For language translation, an appropriate file LANGUAGE.TXT must be written to USB storage – this file is created and supplied by PG Trionic Inc, and contains English text and local language translations.

The LANGUAGE.TXT file translates only to a single language – the correct file for the desired language must be chosen.

Of course, it's possible to use more than one EZcalPro on the same controller, with each translating to a different language using a different LANGUAGE.TXT file.

WARNING: Any attempt to alter the LANGUAGE.TXT file may result in confusing EZcalPro displays. In such a case, simply delete the file from USB storage.

NOTE: The EZcalPro SETUP menu (see “EZcalPro Instructions”) has a setting for TRANSLATE which controls whether language translation is active.

If “YES” is displayed then language translation is active, while “NO FILES” is displayed if the LANGUAGE.TXT file was found in USB storage.

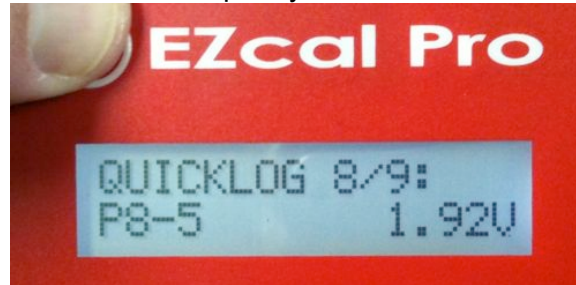
When “YES” is displayed, press UP/DOWN to change to “NO” which will disable language translation temporarily – till the EZcalPro is next powered on. If you wish to permanently disable language translation, simply delete the file LANGUAGE.TXT from USB storage.



1.4 SMART mode enhanced Quick displays

The EZcalPro “?” button instantly shows the controllers current HELP message, while viewing any controller menu (there is no need to exit the current menu and navigate to the HELP menu); this feature works in both LEGACY and SMART modes.

However, in SMART mode, it is possible to customize the function by adding additional menu displays, which can be quickly accessed with the “?” button at any time:



Initially, the “?” button shows only the controllers current HELP message.

To add an additional menu display:

- Access the required display menu using LEFT/RIGHT and ENTER/ESC as needed
- Press and hold the “?” button, then quickly press the UP button
- The menu will be “moved up” in to the Quick display
- Repeat the process for additional display menus (to a maximum of 20)

To access the additional Quick displays:

- Press and hold the “?” button, the current Quick display will appear (which might be the HELP message or a “moved up” menu displays)
- Press LEFT or RIGHT to move between different Quick displays; also shown is the number of “moved up” quick displays

To remove a Quick display:

- Press and hold the “?” button, then press LEFT/RIGHT until the no longer wanted display is shown
- Quickly press the DOWN button; the menu will be removed from the Quick display

NOTE: The current set of Quick displays is remembered by the EZcalPro in the file QUICKLOG.TXT in USB storage:

M439V016=10,48,42,43,44,45,46,160,163

Experienced users can edit this file as needed!

NOTE: Sometimes, after a controller software update, the Quick displays may become un-synchronized with the controller; in this case simply use press “?”+DOWN to remove invalid displays, then “move up” the required displays again.



1.5 EZcalPro QUICKLOG menu

The EZcalPro QUICKLOG menu works in conjunction with the “?” button Quick displays set up in SMART mode.

Sometimes it can be useful to log controller values, while carrying out certain activities on the machine – PG Trionic Inc offers the PGTLOGW program which can do this, but of course it requires connecting a PC which is undesirable in poor weather or when the machine is moving over rough terrain.

The EZcalPro can be configured to log controller values, with no need for a PC (except to read and process the resulting logged data).

To prepare for QUICKLOG:

- Access EZcal controller menus using the EZcalPro SMART mode
- Use the “?” button Quick display – add required menu displays, and remove un-needed ones
- For each controller value to be logged, access it in the normal way using LEFT/RIGHT and ENTER/ESC, then use press “?”+UP to “move up” the display to the Quick displays
- Repeat this for all values to be logged – the order added will determine the order logged
- If there are any extra Quick display values not needed, press “?”+DOWN to remove them; there is no need to remove the Quick HELP message display
- Now press and hold ESC for about 5s, to access the EZcalPro menus

To use QUICKLOG:

- Access the EZcalPro menus and select the QUICKLOG menu
- Enter an appropriate filename; press UP/DOWN to set each character, and LEFT/RIGHT to move between characters; press ENTER when the filename is correct
- The EZcalPro will prompt for confirmation, displaying “:NO” after the filename; to confirm the filename, press UP/DOWN to show “:YES” then press ENTER
- The EZcalPro will now create the filename in USB storage, and carry out initial logging preparation; the display will show “WORKING” followed by “READY TO LOG” (and a number indicating how many controller values will be logged)
- Press ENTER to begin logging; the display will show “LOGGING” and a count which increases for each complete set of values logged to USB storage
- If desired, press LEFT/RIGHT to see individual controller values (and the current EZcal display message) for monitoring purposes
- Press ENTER again to stop logging (there may be a short delay if many values are being logged, as the EZcalPro stops only after finishing the current complete set of values)
- Press ENTER again repeatedly to start/stop logging as needed
- Press ESC to close the file and finish – it is essential to close the file before disconnecting the EZcalPro from the controller

The file created by QUICKLOG has a “.CSV” extension and is “comma-delimited”; spreadsheet programs should be able to open the file and separate logged data in to individual columns.



1.6 EZcalPro QUICKLOG example file

The EZcalPro QUICKLOG ".CSV" file is created with a heading line description of each value, followed by multiple data lines each time stamped with a time since the EZcalPro was connected:

```

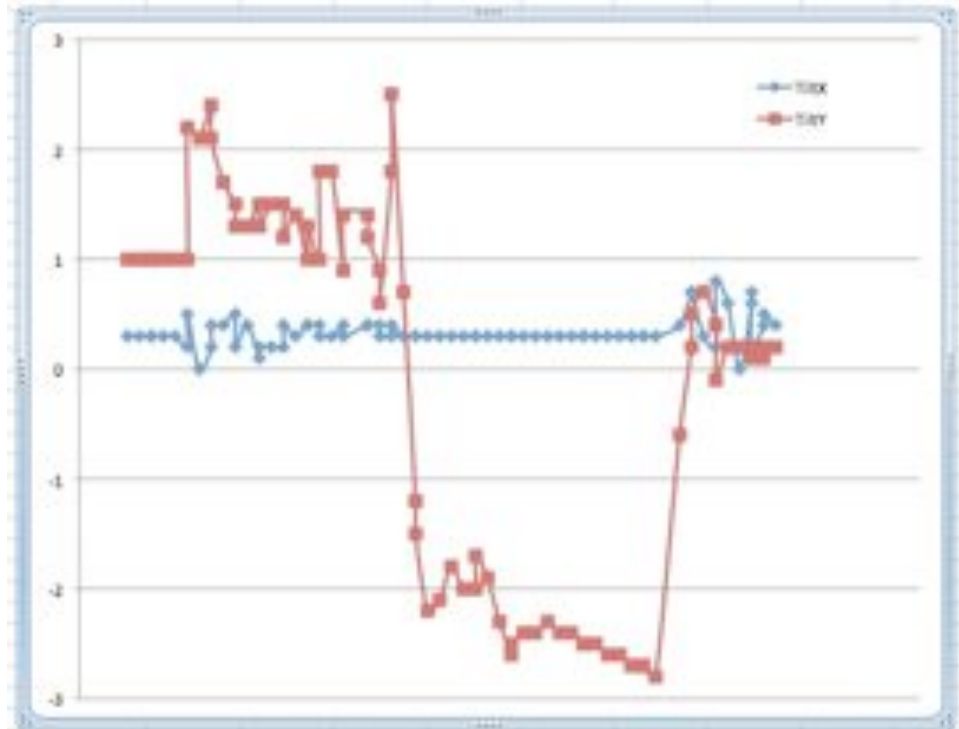
QUICKLOG=M439V016
TIME,"PLATFORM TILT","O/R","Tleft","Tright","P8-5","P8-8"
000409.49,"-1.1',0.4'", "NEUTRAL", "48", "50", "1.92V", "2.14V"
000409.68,"-1.2',0.4'", "NEUTRAL", "49", "52", "1.94V", "2.12V"
000409.87,"-1.2',0.4'", "NEUTRAL", "62", "50", "2.03V", "2.13V"
000410.05,"-1.1',0.6'", "ACTIVE", "72", "55", "2.47V", "2.10V"

```

If this file is opened in a spreadsheet program, it should be able to convert the data in to rows for each set, and columns for each value:

	A	B	C	D	E	F	G
1	TIME	PLATFORM TILT	O/R	"Tleft"	Tright	P8-5	P8-8
2	409.49	-1.1',0.4'	NEUTRAL	48	50	1.92V	2.14V
3	409.68	-1.2',0.4'	NEUTRAL	49	52	1.94V	2.12V
4	409.87	-1.2',0.4'	NEUTRAL	62	50	2.03V	2.13V
5	410.05	-1.1',0.6'	ACTIVE	72	55	2.47V	2.10V
6							
7							

Appropriate selection of controller values to log, logging during relevant machine functions, and careful spreadsheet use, can provide useful machine data, for example:





1.7 EZcalPro QUICKLOG logging speed

The EZcalPro QUICKLOG menu logs multiple data fetched from the controller; fetching each logged data takes time so there is a maximum logging speed determined by the number of items being logged. However, sometimes there is no need to log data at the maximum possible rate – it is possible to set a “maximum logs per second” rate to limit logging when needed.

To set the maximum QUICKLOGrate of the EZcalPro:

- Access the EZcalPro menus and select the SETUP menu
- Access the QUICKLOGrate sub-menu; press UP or DOWN to set the maximum number of logged data sets per second (from 1 to 99 per second)
- Be aware that high rates may not be achievable when logging many data items
- NOTE: The selected rate is remembered until it is changed again

1.8 EZcalPro QUICKLOG manual logging

The EZcalPro QUICKLOG menu can be configured to log a single set of data items, instead of continuously logging.

In the EZcalPro SETUP menu, set QUICKLOGrate to zero (0).

Now in the QUICKLOG menu, when READY TO LOG is shown, press ENTER to log a single set of data items.

Repeat as needed by pressing ENTER additional times. Remember to press ESC to close the file, when done.

NOTE: The selected zero rate is remembered until it is changed again.