

EZcal Max Advanced



EZcal Max features

- Diagnosis and configuration of PG Trionic controllers
- Built-in USB storage, SAVE, LOAD, PGFLASH functions
- CANBUS connectivity (logging, etc)
- See “EZcal Max Instructions” for primary use descriptions

EZcal Max advanced features

- SMART and LEGACY modes for EZcal
- Language translation localizes display text
- QUICKLOG records controller data during operation
- Update of EZcal Max (simple USB drag/drop)

1.1 EZcal Max LEGACY & SMART modes for EZcal

EZcal Max SETUP menu (see “EZcal Max Instructions”) has two settings for EZCAL MODE: LEGACY and SMART; this determines how EZcal Max works when displaying controller menus (ie: what is seen when EZcal Max is connected to a PG Trionic Inc controller).

In the SMART mode, EZcal Max fetches menu descriptions and value data from the controller, and decides for itself what to display. Display scrolling is designed so that the value is always visible. In SMART mode EZcal Max also pre-fetches (“caches”) menu data when not busy, for maximum speed for example with SAVE.

The SMART mode is compatible with most PG Trionic Inc controllers; however a few unusual controller features may not work as expected.

Occasionally a PG Trionic Inc controller has a new display feature that EZcal Max doesn't support – in such a case a flashing ? is displayed; check for an update to EZcal Max.

In the LEGACY mode, EZcal Max simply displays messages that come from the connected controller – EZcal Max simply acts as a display window, showing whatever the controller instructs it to do. Scrolling includes the value, and only the first 16 characters of the display are used.

In this mode many EZcal Max features don't work!

NOTE: EZcal Max always powers up in SMART mode!

EZcal Max Advanced

1.1.1 EZcal Max SMART mode enhanced scrolling

EZcal Max 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.

1.1.2 EZcal Max SMART mode language translations

EZcal Max SMART mode can translate individual English words and phrases so that displayed messages / menus / etc are shown in the users preferred language. The 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.

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

NOTE: EZcal Max SETUP menu (see “EZcal Max 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 not found in USB storage.

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

1.1.3 EZcal Max SMART mode enhanced Quick displays

The “?” 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 controller 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 25)

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

EZcal Max Advanced

EZcal Max offers additional behaviors for the “?” button (see EZcal Max SETUP menu in “EZcal Max Instructions”):

NORMAL works as described above

LATCHED keeps the “?” display shown even when “?” is released, till ESC pressed

MULTI shows 2 or 3 values from the Quick display, simultaneously (LEFT/RIGHT move through the list to choose the values)

MULTILATCHED combines LATCHED and MULTI

NOTE: It's also possible to change the “?” mode by pressing the MODE button while “?” is pressed.

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

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

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

1.1.4 EZcal Max SMART mode QSAVE

Pressing LEFT and RIGHT at the same time while viewing any controller menu immediately triggers a SNAPSHOT SAVE using the filename “QSAVE” (it's recommended that SEQUENCING is active so that each time a new file is created).

1.2 EZcal Max QUICKLOG menu

EZcal Max QUICKLOG menu works in conjunction with the “?” button Quick displays (described above). It can be useful to log controller values, while carrying out certain activities on the machine.

To prepare for QUICKLOG:

- Access controller menus using EZcal Max SMART mode
- 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

To use QUICKLOG:

- Access EZcal Max 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
- EZcal Max will prompt for confirmation, displaying “:NO” after the filename; to confirm the filename, press UP/DOWN to show “:YES” then press ENTER
- EZcal Max 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)

EZcal Max Advanced

- 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, since EZcal Max 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 EZcal Max 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.

1.2.1 EZcal Max QUICKLOG with CANBUS

When EZcal Max detects CANBUS activity it's possible to view CANBUS messages and selected IDs (see later); if CANBUS is active when QUICKLOG is used, any selected CANBUS messages will be logged when they are received, along with the other selected QUICKLOG data – this can be particularly useful to associate particular CANBUS messages with controller data

1.2.2 EZcal Max QUICKLOG2/3/4

When the QUICKLOG menu is displayed (not yet selected), press UP/DOWN to select between QUICKLOG and QUICKLOG2/3/4 – a different QUICKLOG.TXT file is used for each choice, allowing for multiple logs to be configured for a single controller.

IMPORTANT: The normal QUICKLOG.TXT file is selected when EZcal Max is connected; it's necessary to switch to the 2/3/4 file, then use “?”+UP/DOWN to set up each of the log files.

QUICK TRICK: Press/hold “?” and press ESC to get to QUICKLOG EZcal Max menu; press UP/DOWN to change to the desired log, then press ESC to jump back to the controller menus (don't press LEFT, RIGHT, or ENTER).

1.2.3 EZcal Max QUICKLOG example file

EZcal Max QUICKLOG “.CSV” file is created with a heading line description of each value, followed by multiple data lines each time stamped:

QUICKLOG=M18497V015

TIME,"ENABLED","SUPPLY","TILTED","TILT","ANGLE","LENGTH",NOCANBUS

00000.115,"YES","14.6V","NO",-0.1,-0.5,"0.0","73%"

00000.146,"YES","14.6V","NO",-0.1,-0.3,"0.0","75%"

00000.208,"YES","14.6V","NO",-0.2,-0.5,"0.0","76%"

00000.270,"YES","14.6V","NO",-0.1,-0.6,"0.0","78%"

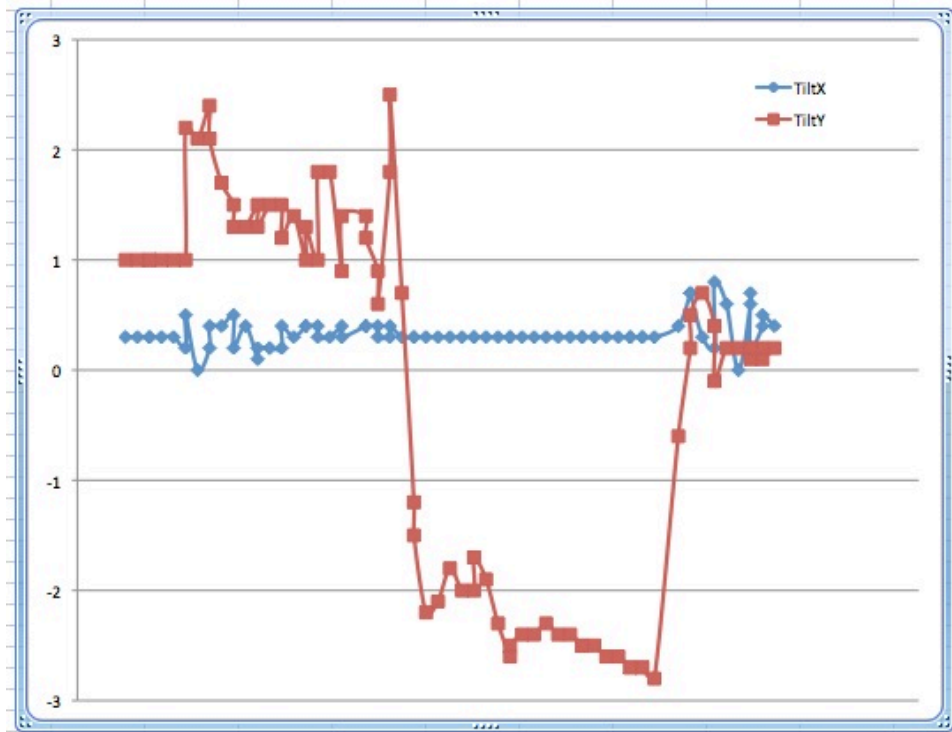
00000.331,"YES","14.6V","NO",-0.1,-0.4,"0.0","79%"

EZcal Max Advanced

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

	A	B	C	D	E	F	G
1	QUICKLOG=M18497V015						
2	TIME	ENABLED	SUPPLY	TILTED	TILT	ANGLE	LENGTH
3	0.115	YES	14.6V	NO	-0.1',-0.5'	0.0'	73%
4	0.146	YES	14.6V	NO	-0.1',-0.3'	0.0'	75%
5	0.208	YES	14.6V	NO	-0.2',-0.5'	0.0'	76%
6	0.27	YES	14.6V	NO	-0.1',-0.6'	0.0'	78%
7	0.331	YES	14.6V	NO	-0.1',-0.4'	0.0'	79%

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



1.2.4 EZcal Max QUICKLOG logging speed

EZcal Max 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.

NOTE: EZcal Max can often log data much faster than original EZcal Pro!

- Access EZcal Max menus and select the SETUP menu
- Access the QUICKLOG 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

EZcal Max Advanced

1.2.5 EZcal Max QUICKLOG manual logging

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

In EZcal Max 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.

1.2.6 EZcal Max SLOWLOG logging speed

EZcal Max QUICKLOG logging can be at much slower rates, allowing for long term datalogging.

- Access EZcal Max menus and select the SETUP menu
- Access the QUICKLOG sub-menu; press DOWN to reach 0, and press down again
- The sub-menu will change from QUICKLOG to SLOWLOG, and the setting will now be number of seconds between logs
- Press UP or DOWN to set the required time between logs (from 1 second to 255 seconds)
- NOTE: The selected rate is remembered until it is changed again

To return to normal QUICKLOG rate:

- Access EZcal Max menus and select the SETUP menu
- Access the SLOWLOG sub-menu; press DOWN to reach 0, and press down again
- The sub-menu will change back to QUICKLOG, and the setting will again be number of logs per second (defaulting to 15/s)
- Repeat adjustment as above (section 1.2.4)

EZcal Max Advanced

1.3 EZcal Max FLASHSAVE

EZcal Max PGFLASH menu normally is used to update the software of a controller, but it can be used to replace a controller's original program with software for a different type, although this is **not recommended** (and the program warns and refuses to do so, on the first attempt!)

Sometimes, when forcing different software into a controller, the CALIBRATIONS data is lost (if the different software stores the data in different places).

If the FLASHSAVE option is enabled, PGFLASH will store the calibrations prior to replacing the software, then optionally restore them to the new software.

To set the FLASHSAVE option:

- Access EZcal Max menus and select the SETUP menu
- Access the FLASHSAVE sub-menu; press UP or DOWN to select NO or YES
- When YES is selected, FLASHSAVE will be attempted

When the FLASHSAVE option is enabled, and PGFLASH is used to replace software, a short FLASHSAVE display occurs before software is updated, while calibrations are stored. After the update, a warning is displayed "WARNING! PART NUMBER CHANGED" - press ENTER now and a second FLASHSAVE is displayed, while calibrations are restored.

IMPORTANT: It is not recommended to change controller software to that of a different type; even if the replacement results in a working controller, the part number label will be incorrect. Warranty claims may be affected by such action.

1.4 EZcal Max ABOUT

EZcal Max ABOUT menu has many diagnostic details that might assist in troubleshooting EZcal Max usage with a problem controller. When the ABOUT menu is selected, various items are shown one at a time (LEFT/RIGHT move between items). It's important to note that prior to displaying values, every item is first written to file EZCALPRO.TXT which can then be accessed via USB and used for troubleshooting.

- (C)opyright line shows company name: "(C)2009-21 PG Trionic Inc"
- Software version shows build version and date: "V11.12 Apr 21 2021"
- FILE SYSTEM shows number of files, as well as used/total storage: "FILE SYSTEM OK (8) 398K/4042K" which shows 8 files in USB drive, using 398K storage, about 10% of the total available
If "FILE SYSTEM BAD" is shown, it might be necessary to FORMAT the storage (a connected PC has possibly corrupted the storage!)
- CACHE shows the cached controller menu activity: "CACHE=234(FULL), 518, 7" shows that 234 controller menus have been cached, along with 518 messages and 7 long messages
- MACHINE shows the software identification of connected controller: "MACHINE=18497/V1.5" indicates software 18497, version V1.5
- CODE shows the most recent communications message to connected controller: "CODE=\$00, TX=\$1F, RX=\$9F, ADDR=\$000206, LEN=\$04, ERR=\$20" shows no specific error to the last transmitted message 31 but with response 31+128 (rejected)

EZcal Max Advanced

- BOOT shows details about the most recent PGFLASH activity (if it's happened, otherwise all values will be zero): "BOOT=182, FLASH=618, CODE=0, TRICK@0=0" shows that PGFLASH was connected to a controller with BOOT version 182 using FLASH parts 618, and there was no special CODE and TRICK activity
- CSUM shows more details about the most recent PGFLASH activity: "CSUM=\$004008/8=9C8F0100D222F87B" shows checksum data from the connected controller, which is used to determine if the controller already is programmed to a selected PGFLASH file
- LASTFILE shows the most recently used file (PGFLASH, LOAD, etc): "LASTFILE=GP500_20210421.SREC, LINE=0, CODE=0, LOAD=0/0"
- DCODE shows if a controller display menu wasn't supported by EZcal Max: "DCODE=0,ADDR=0,MSG=\$0000" shows that there was no menu display problem
- NONVOL shows details about EZcal Max storage: "NONVOL=\$7B/\$24 \$1F/\$27/\$01 !0"
- IO shows details about EZcal Max measurements: "IO=100,13.3V,5.1V,858/80(50)" shows an RS232 supply of 13.3V, a USB supply of 5.1V, an internal temperature of "80" (which is NOT 80f or 80c!), and a display scroll speed of "50" (EZcal Max will use bigger numbers in cold temperatures to compensate for the display responding more slowly)
- ADDRS shows forced address data: "ADDRS=0,0,0,0" shows no forced data

EZcal Max Advanced

2.1 EZcal Max CLONE SAVE / RESTORE menus

EZcal Max CLONE SAVE and CLONE RESTORE menus work together to enable simple and quick transfer of all PGT controller data including machine calibrations (height, overload, etc) from one controller to another. This is useful in particular if it is necessary to replace a controller.

To prepare for CLONE use:

- CLONE menus are **only available by pressing DOWN** while connecting EZcal Max to the controller
- When connected with DOWN pressed, the CLONE SAVE menu is immediately displayed

To use CLONE SAVE:

- The CLONE SAVE menu should be seen as soon as EZcal Max is connected to the "original" controller, with DOWN pressed
- There is no need to enter a filename - the file PGTCCLONE.TXT is always used
- BE SURE that you are connected to the "original" controller that you wish to clone data from
- EZcal Max will prompt for confirmation, displaying “:NO”; to confirm the CLONE SAVE function, press UP/DOWN to show “:YES” then press ENTER
- The display will show “WORKING” followed by a counter that increases as all the "original" controller data is saved
- "FINISHED" is displayed when the CLONE SAVE is complete; it's OK now to disconnect

To use CLONE RESTORE:

- After connecting EZcal Max to the "replacement" controller with DOWN pressed, and seeing the CLONE SAVE menu, press RIGHT to see the CLONE RESTORE menu
- There is no need to enter a filename - the file PGTCCLONE.TXT is always used
- BE SURE that you are connected to the "replacement" controller that you wish to clone data to; **any and all existing data in this controller will be replaced!**
- EZcal Max will prompt for confirmation, displaying “:NO”; to confirm the CLONE RESTORE function, press UP/DOWN to show “:YES” then press ENTER
- To be really certain, EZcal Max will show "PROCEED?" and request a second confirmation - again change “:NO” to “:YES” and press ENTER
- "SCANNING MENUS" is displayed while the controller is being checked to make sure it's ok to restore to
- “WORKING” is displayed (followed by a counter that increases) while the controller data is restored
- "FINISHED" is displayed when the CLONE RESTORE is complete

During CLONE RESTORE, error messages will be shown if the "replacement" controller is not of the same type, or if it has a software version older than that of the "original" controller.

EZcal Max Advanced

3.1 EZcal Max CANBUS features

EZcal Max has a CANBUS connector in addition to the RS232 connector, which can connect to CANBUS systems to both monitor / view / log messages, as well as execute programs to transmit CANBUS messages that for example re-configure or CANFLASH update PGT CANBUS products, simulate CANBUS devices, etc.

3.2 EZcal Max CANBUS connections

The three pin CANBUS connector wiring matches that of almost all PGT products:

- 1: CANBUS +
- 2: CANBUS –
- 3: 0V reference

Note that RS232 (or USB) power is also needed (CANBUS does not provide power).

When EZcal Max is connected to an active CANBUS it will automatically detect the speed; selecting CANBUS (using the MODE button or the CANBUS EZcal Max menu) will show the detect speed (50K/125K/250K) as well as an increasing count of messages, and a bus load indicator (“VIEW (597,17%)”).

When connected (with the VIEW count displayed), press ENTER to VIEW individual messages as they are transmitted (see below).

When connected, press LEFT/RIGHT to move between different CANBUS menus (see below).

If there is no detected CANBUS activity, the display shows “SPEED AUTO” (assuming CANBUS has been left at the default “AUTO” configuration – see EZcal Max SETUP menu). Pressing UP/DOWN selects between AUTO/50K/125K/250K/DISABLED as well as additional speed choices with “+TX” shown.

IMPORTANT:

CANBUS communications occurs via a two wire bus and requires at least two active devices to work properly. When any CANBUS device transmits on the bus it (1) detects if the bus is in use by another device, (2) detects if it's own transmission is corrupting the bus and (3) requires another device to acknowledge the bus activity.

Therefore when a single CANBUS device is connected, the bus is in fact not working.

By default, EZcal Max does NOT acknowledge any CANBUS messages – this allows safe connection to an active CANBUS without risk of corruption. However when connecting to a single device, the speed cannot be detected.

In this case, make sure that you know the correct speed, and set CANBUS to that speed with “+TX” selected. When you press ENTER, EZcal Max will set the indicated speed and start acknowledging messages. If you've set the correct speed, messages will be detected and the VIEW count will appear. If you've set the wrong speed, you will have unpredictable results.

EZcal Max Advanced

3.3.1 EZcal Max CANBUS VIEW menu

When messages are detected on CANBUS, the VIEW display is also a VIEW menu; press ENTER to select the VIEW menu which shows individual messages.

Messages are shown in CANBUS ID order with the top line showing the ID and DLC, and the second line showing the (up to 8 bytes) data. A flashing * bottom right shows that the message is regularly being received.

Press LEFT/RIGHT to move from one message to another. Press ESC to exit the VIEW menu.

While viewing a message press ENTER to toggle selection of that CANBUS ID (a diamond is shown top right when message is selected). See "CANBUS LOGSELECTED" menu.

3.3.2 EZcal Max CANBUS LOGALL menu

When messages are detected on CANBUS, the LOGALL menu allows for logging of all CANBUS activity; the resulting file shows every message ID/DLC/data with a timestamp.

- Access EZcal Max CANBUS menus and select the LOGALL 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
- EZcal Max will prompt for confirmation, displaying ":NO" after the filename; to confirm the filename, press UP/DOWN to show ":YES" then press ENTER
- EZcal Max will now create the filename in USB storage, and log all CANBUS messages to it; a count shows how many messages have been logged.
- Press ESC to stop logging

NOTE: At high CANBUS speeds with very many active messages, EZcal Max might not be able to keep up with logging every message (the warning "BUSOVF" is written to the log file if this happens).

3.3.3 EZcal Max CANBUS LOGSELECTED menu

When messages are detected on CANBUS, the LOGSELECTED menu allows for logging of selected CANBUS activity (useful when there's a lot of CANBUS activity but only some of it is important).

Messages are selected using the VIEW menu (above), press ENTER to show the diamond selected indicator on messages that you wish to log

- Access EZcal Max CANBUS menus and select the LOGSELECTED menu
- If "NO" is displayed, no messages have been selected (or are currently being received)
- 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
- EZcal Max will prompt for confirmation, displaying ":NO" after the filename; to confirm the filename, press UP/DOWN to show ":YES" then press ENTER
- EZcal Max will now create the filename in USB storage, and log selected CANBUS messages to it; a count shows how many messages have been logged.
- Press ESC to stop logging

EZcal Max Advanced

3.3.4 EZcal Max CANBUS MANAGE SELECTED menu

In the CANBUS VIEW menu messages can be selected, but they cannot be unselected if they are not being received.

The MANAGE SELECTED menu allows for all selected CANBUS IDs to be removed, or for individual IDs to be removed from the selected list.

- Access EZcal Max CANBUS menus and select the MANAGE SELECTED menu
- Press ENTER when “ERASE ALL SELECTED”, or a specific CANBUS ID, is displayed, to remove all or the specific ID from the selected list; press ESC to exit
- If there are no selected CANBUS IDs, “EMPTY” is displayed

3.3.5 EZcal Max CANBUS PLAYBACK menu

EZcal Max can “playback” messages previously logged to file (with LOGALL or LOGSELECTED). Selections allow all or just some of the logged messages to be played back – and playback means transmitting the logged messages over CANBUS at the same rate they were originally logged.

- Access EZcal Max CANBUS menus and select the PLAYBACK menu
- Available CSV files are displayed, press ENTER while NO is displayed to ignore, or press UP to select YES then ENTER to select a particular file
- An error occurs if the file is not a PGT CANBUS LOGALL or LOGSELECTED file; an error occurs if CANBUS is active at a different speed to that logged
- Press UP/DOWN to select ALL to playback all logged messages, or NONE to select none; press LEFT/RIGHT to see each logged CANBUS ID and use UP/DOWN to select/de-select individual messages; the display shows a count of how many have been selected
- Press ENTER once at least one message has been selected for playback; press ENTER again to confirm ONCE which plays the file once, or UP/DOWN to change to REPEAT and ENTER to confirm playing the file repeatedly forever (till ESC pressed)
- While playback is running, a count is shown of the number of messages transmitted, along with a pass count

3.3.6 EZcal Max CANBUS COMMANDS menu

EZcal Max CANBUS features include a built in powerful “Basic like” programming language that allows arbitrary CANBUS transmit and receive in addition to features such as variables, math, display / input, timing, etc.

PGT engineers might provide CANBUS COMMANDS programs to configure CANBUS speed / id of a module, or even to update PGT CANBUS modules with new programs (like PGFLASH but over CANBUS).

This documentation does not describe the language.

- Access EZcal Max CANBUS menus and select the COMMANDS menu
- Available CANBUS COMMANDS files are displayed, press ENTER while NO is displayed to ignore, or press UP to select YES then ENTER to execute the file
- When a CANBUS COMMANDS program is executed, the display and results depend on the program
- Wait for the program to finish hopefully with an appropriate PASS message (or FAIL message)
- Press ESC to abort a running program – be very careful since an aborted CANBUS program could leave a CANBUS module unusable!

EZcal Max Advanced

3.4 EZcal Max CANBUS example log file

CANBUS log files are written “comma-delimited” with “.CSV” extension; spreadsheet programs should be able to open the file and separate logged data in to individual columns. The normal “\$” symbol to indicate hexadecimal values is not used, to prevent spreadsheets converting the data to money format.

	A	B	C
1	PGTCANBUSLOGALL@250		
2	TIME(ms)	ID/DLC	DATA
3	8	h0089/4	h67026700
4	8	h0185/8	h6600FF8200200052
5	9	h0285/8	hFFFF010000000915
6	10	h0385/8	h1500000000000000
7	57	h0089/4	h67026700
8	57	h0185/8	h6600FF8200200052
9	58	h0285/8	h0000010000000915
10	58	h0385/8	h1500000000000000
11	106	h0089/4	h67026700
12	107	h0185/8	h6600FF8200200052
13	107	h0285/8	hFFFF010000000915
14	108	h0385/8	h1500000000000000
15	156	h0089/4	h67026700
16	157	h0185/8	h6600FF8200200052

EZcal Max Advanced

4.1 EZcal Max updates

The program within EZcal Max can be updated to provide additional features or to support newer PG Trionic, Inc controllers. A simple text file (with “.S19” extension) provides the code to update – there’s no requirement for an update program on PC.

To update EZcal Max, connect to a PC via USB **while holding down the UP arrow** key (remember UP=UPdate); EZcal Max will display “READY FOR S19 FILE”. A USB drive called “PGTEZUPDATE” will appear on PC; drag/drop the “.S19” file onto the drive.

EZcal Max display will count up as data is received, and show “FINISHED!” when the whole file has been processed.

Eject the drive from PC, then power cycle EZcal Max to have it running the new program.

EZcal Max ABOUT menu can be used to confirm the update, if necessary.

IMPORTANT:

Be sure to distinguish the “PGTZUPDATE” USB drive that appears when updating EZcal Max (connecting USB while pressing UP) from the regular USB drive (called “EZCALMAX”) that appears when connecting EZcal Max to PC when UP is not pressed.

If you drag/drop the “.S19” file to the regular “EZCALMAX” USB drive, no update will occur.