

Change log for
HP8442 / HP8443 Power Box

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1) Firmware version:

| Date | Version | Text |
|------------|---------|--|
| 2024-03-13 | 1.18.2 | Problem reading input 5..12 during powerdown May either leave power down unexpected, or not able to leave power down. Error in switching pull-up for input 3 and 4 |
| 2024-03-17 | 1.19.0 | Number of "Sequence" functions increased from 4 to 8. New Sequence modes: "3 step, add" (Off -> A -> A+B -> Off) "4 step, add" (Off -> A -> A+B -> A + B + C -> Off) Require PCTool version 1.9.0 (or later). Note: This update require read + update + write procedure. |
| 2024-03-22 | 1.19.1 | Short circuit detection stopped when battery voltage low (solve problem with unwanted error if powered by USB). |
| 2024-03-29 | 1.20.0 | Blink Keypad: Added setup if No CAN data (Off / On / Hold (Off) / Hold (On)) Selection of Enabled CAN Export 5 pages. HP8443: CAN Export 5 transmit 12 pages, but only 5 in use (corrected). Note: This update require read + update + write procedure. |
| 2024-05-12 | 1.21.0 | Error in restarting Delay timer fixed. Falling edge trigger option added to Delay timer (max. reduced from 3000 sec. to 1500 seconds). |
| 2024-05-17 | 1.22.0 | Flash timer: Automatic change to [10ms] update rate if both On and Off time below 2,5 seconds. Max. Flash count setting reduced from 255 to 99. |
| 2024-05-28 | 1.22.1 | Fix Power down issue on some HP8442 units (where FT232 USB mounted). |
| 2024-06-13 | 1.22.2 | CAN input with "No CAN data" set to "Set off" or "Hold state, default On" was not set to On after power on. |
| 2024-06-19 | 1.23.0 | Virtual input delay split up in 2 range: 0,0..12,5 seconds in [100ms] step. 13..125 seconds in [1 second] step. If existing virtual delay above 12,5 seconds, read + update + write procedure is required. |
| 2024-06-23 | 1.23.1 | Verify first CAN Export message after Power On was a RTR frame. (Internal reset of CAN RTR flag missing) |
| 2024-06-25 | 1.23.2 | +30 signal only logic 1 when battery voltage above 6,0V |
| 2024-07-24 | 1.24.0 | "Kill" function not working for Low power outputs (corrected). 2 new "Temperature" signals added (+ threshold settings). New "+30 (delayed)" signal added (+ settings of delay). Delay timer module re-written, now supports 4 different timer modes (Backwards compatible). Production test: Automated calibration/test of outputs. |
| 2024-07-24 | 1.24.1 | Production test updated: Auto calibration of battery + analog inputs. |
| 2024-07-29 | 2.0.0 | Number of CAN inputs increased to 52. |

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| | | <p>Number of Delay timer increased to 20. "Output group" configuration added. (internal data structured changed: All texts moved to external EEPROM). Note: This update require read + update + write procedure.</p> |
| 2024-09-12 | 2.1.1 | Error in password (not accepted) if more than 8, 9 or 10 characters. |
| 2024-11-01 | 2.1.2 | Minor change in calibration during production. |
| 2024-11-10 | 2.2.0 | HP8442 only: Error on Out-23 when Out-7 linked to Out-20 fixed. |
| 2024-11-23 | 2.3.0 | <p>Error in CAN input if 'signed' and bit size different to 8 or 16 bits. System info text (up to 510 characters). 12 new Analog level signal added (on Input 3 or 4 in analog mode). Delay timer for battery low and battery recover added. Note: This update require read + update + write procedure.</p> |
| 2024-11-25 | 2.3.1 | <p>Internal checksum added to configuration data. (solve problem with uncontrolled output state during update where internal data structure changed). Backup / automatic restore to/from of configuration data to external EEPROM added.</p> |
| 2024-11-25 | 2.3.2 | Fix of error in Invert function for High-power output (introduced in version 2.3.1). |
| 2024-12-06 | 2.4.0 | <p>Code Checksum verification and automatic restore of EEPROM re-written. Calibration data send to PC during productions test (and saved to file). Note: This update require read + update + write procedure.</p> |
| 2024-12-08 | 2.4.1 | Issue with Password (wrong / invisible characters (fixed)). |
| 2024-12-10 | 2.4.2 | Wakeup from low signal on input 5..11 did not work (fixed). |
| 2025-03-12 | 2.5.0 | <p>Support / setup page for Gray hill CAN-J1993 Gen. 2 key pad added. Tested on part number: 3K006-G2-2RC3AW + 3K208-G2-2RC3AW Error when sending 29-bit CAN message corrected. Note: This update require read + update + write procedure.</p> |
| 2025-03-17 | 2.6.0 | <p>Support / setup page for HP9642 key pad added. Errors in solution for Grayhill keypad fixed. Note: This update require read + update + write procedure.</p> |
| 2025-05-14 | 2.7.0 | <p>Configuration version number added. Periodic CAN message possible. Note: This update require read + update + write procedure.</p> |
| 2025-05-27 | 2.8.0 | <p>Support / setup page for Gray hill CAN-Open 3KG1 series key pad. CAN input: Range operator added. On-status signal from HP8480 added.</p> |
| 2025-06-10 | 2.9.0 | <p>Support for dual Blink Marine PKP series keypad (CAN open). Number of keys pr. Keypad: 4, 6, 8, 10 or 12. Note: This update require read + update + write procedure.</p> |
| 2025-07-03 | 2.9.1 | <p>After wakeup from power down, update of Switch-inputs did first start after approx. 600ms (making delayed update of outputs controlled by inputs) – fixed. CAN Export 5: Page 13 added.</p> |
| 2025-08-12 | 2.9.2 | Error in writing HP9642 keypad configuration first time after keypad enabled. |

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| 2025-08-23 | 2.10.0 | CAN Export 5, Page 13 added. CAN Export 5 update interval unit changed from [x10ns] to [x1ms] Note: This update require read + update + write procedure. |
| 2025-08-27 | 2.11.0 | Sequence: Edge set / Reset function added. |
| 2025-09-13 | 2.11.1 | GrayHill CAN open Keypad does not start after Power cycle. CANopen Go-operational changed to broadcast Node-ID. |
| 2025-09-17 | 2.11.2 | Delay timer, Off timer (signal time extend) mode: Small drop at timeout when timer restarted – fixed. |
| 2025-10-18 | 2.11.3 | 10 second timeout (safety) for detecting Wiper Park added. (When waiting for Park, Wiper stop after 10 sec.) |
| 2025-12-06 | 2.11.4 | CAN Export 5, Page 13, Power down timer: Byte order changed to big-endian (high byte, low byte). |
| 2025-12-14 | 2.12.0 | CAN Export Loop back option added. New page 13 on CAN Export 5 (analog voltage + new status byte). Custom CAN Export messages (on CAN Export 1). Note: This update require read + update + write procedure. |
| 2026-01-02 | 2.12.4 | Bug fix / updates of new Custom CAN Export message feature. Bug fix / updates of Blink Marine keypad support. |
| 2026-01-02 | 2.12.5 | Bug fix, Blink Marine keypad: Read/Write names of key 6..12 |
| 2026-01-25 | 2.12.7 | All CAN Export messages length changed to 8 bytes (unused bytes set to 0x00) "CAN switching enabled if input active" now also stop all CAN Export messages. |
| 2026-01-26 | 2.12.8 | Minor errors in last update (version 2.12.7) fixed. |

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2) PCTool version:

| Date | Version | Text |
|------------|---------|--|
| 2024-03-13 | 1.18.1 | No change – latest version... |
| 2024-03-17 | 1.19.0 | Number of “Sequence“ functions increased from 4 to 8. New Sequence modes: “3 step, add” (Off -> A -> A+B -> Off) “4 step, add” (Off -> A -> A+B -> A + B + C -> Off) Require firmware version 1.9.0 (or later). Note: This update require read + update + write procedure. |
| 2024-03-22 | 1.19.1 | Missing setup of Wiper Stop signal. CAN Node-ID not loaded from file (set back to 0x15 when loaded from file). |
| 2024-03-25 | 1.19.2 | Label text correct for HP8443 |
| 2024-03-28 | 1.19.3 | Delay timers: On time not saved/loaded to disk. Wiper: Wash and Park/home signal saved/loaded to disk. Wiper: Interval and Wash time not clear when making New configuration |
| 2024-03-29 | 1.20.0 | Blink Keypad: Added setup if No CAN data (Off / On / Hold (Off) / Hold (On)) Selection of Enabled CAN Export 5 pages. Wrong Timeout timer for ‘Default settings’ changed to 15 seconds. HP8443: CAN Export 5 info page corrected. Note: This update require read + update + write procedure. |
| 2024-05-12 | 1.21.0 | Falling edge trigger option added to Delay timer (max. reduced from 3000 sec. to 1500 seconds). Display of CAN value in Overview- and CAN setup page (require CAN monitor is active). |
| 2024-05-17 | 1.22.0 | Flash timer: Automatic change to [10ms] update rate if both On and Off time below 2,5 seconds. Max. Flash count setting reduced from 255 to 99. |
| 2024-06-19 | 1.23.0 | Virtual input delay split up in 2 range: 0,0..12,5 seconds in [100ms] step. 13..125 seconds in [1 second] step. If existing virtual delay above 12,5 seconds, read + update + write procedure is required. |
| 2024-07-21 | 1.23.1 | If illegal PWM factor setting an access violation error occur (fixed). Field PWM CAN ID updated for 28-bit Extended CAN-ID. |
| 2024-07-24 | 1.24.0 | “Kill” function not working for Low power outputs (corrected). 2 new “Temperature” signals added (+ threshold settings). New “+30 (delayed)” signal added (+ settings of delay). Delay timer module re-written, now supports 4 different timer modes (Backwards compatible). Production test: Automated calibration/test of outputs. |
| 2024-07-24 | 1.24.1 | Production test updated: Auto calibration of battery + analog inputs. |
| 2024-07-24 | 2.0.0 | Number of CAN inputs increased to 52. |

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| | | <p>Number of Delay timer increased to 20. “Output group” configuration added. Status of CAN input 33..52 + Delay timers + Temperature added to “Overview 2”. “Socket info” page replaced by new “Pinout” window under “Help”. Note: This update require read + update + write procedure.</p> |
| 2024-08-18 | 2.1.0 | <p>Add “Confirm” dialog before Read and Write configuration from/to HP8442/HP8443. (dialog only shown once and/or when relevant).</p> |
| 2024-09-12 | 2.1.1 | <p>Error in password (not accepted) if more than 8, 9 or 10 characters. Blink Key pad settings not hidden read-only mode (password protected).</p> |
| 2024-11-01 | 2.1.2 | <p>Minor change in calibration during production.</p> |
| 2024-11-10 | 2.2.0 | <p>Navigation via Tab-key fixed.</p> |
| 2024-11-23 | 2.3.0 | <p>After viewing “Flash / Timer /..”, error in frequency selection for PWM group 1. Error in CAN input if ‘signed’ and bit size different to 8 or 16 bits. System info text (up to 510 characters): General -> Boxinfo -> Info page 12 new Analog level signal added (on Input 3 or 4 in analog mode). Delay timer for battery low and battery recover added. Min / Max / Low / High setting for analog input 3 & 4 not save to file. In some cases auto read after “Default settings” failed (fixed). Note: This update require read + update + write procedure.</p> |
| 2024-11-25 | 2.3.1 | <p>Internal checksum added to configuration data. (solve problem with uncontrolled output state during update where internal data structure changed).</p> |
| 2024-12-06 | 2.4.0 | <p>Calibration data send to PC during productions test and saved to file. Note: This update require read + update + write procedure.</p> |
| 2024-12-13 | 2.4.2 | <p>Minor error in configuration of Analog level signal when using both groups on one input.</p> |
| 2025-01-28 | 2.4.3 | <p>When loading configuration from file, CAN input “Equal” operator changed to “Greater than” operator. This error was introduced in version 2.3.0.</p> |
| 2025-03-12 | 2.5.0 | <p>Support / setup page for Grayhill CAN-J1993 Gen. 2 keypad added. Tested on part number: 3K006-G2-2RC3AW + 3K208-G2-2RC3AW Note: This update require read + update + write procedure.</p> |
| 2025-03-17 | 2.6.0 | <p>Support / setup page for HP9642 key pad added. Errors in solution for Grayhill keypad fixed. Note: This update require read + update + write procedure.</p> |
| 2025-04-14 | 2.6.1 | <p>Wider width of entry field for display/selecting Input signals on High- and Low- power output page.</p> |
| 2025-05-14 | 2.7.0 | <p>Configuration version number added. Periodic CAN message possible. Note: This update require read + update + write procedure.</p> |
| 2025-05-27 | 2.8.0 | <p>Support / setup page for Gray hill CAN-Open 3KG1 series key pad. New window for configuration of Gray hill CAN-Open 3KG1 series key pad. CAN input: Range operator added. On-status signal from HP8480 added. Minor error when changing key pad type fixed (error in displayed signals).</p> |

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| 2025-06-10 | 2.9.0 | Support for dual Blink Marine PKP series keypad (CAN open). Number of keys pr. Keypad: 4, 6, 8, 10 or 12. Note: This update require read + update + write procedure. |
| 2025-07-03 | 2.9.1 | Power down -> USB / PCTool keep active was always set after loading configuration file from disk. Fixed (does now load saved setting). |
| 2025-08-02 | 2.9.2 | Error reading key names above 8 from HP9642 keypad fixed. |
| 2025-08-18 | 2.9.3 | Viper park signal not update at first read from HP844x after starting PCTool. |
| 2025-08-23 | 2.10.0 | CAN Export 5, Page 13 added. CAN Export 5 update interval unit changed from [x10ns] to [x1ms] Note: This update require read + update + write procedure. |
| 2025-08-27 | 2.11.0 | F5: Update Windows added Sequence: Edge set / Reset function added. Error in PWM setup fixed. |
| 2025-09-19 | 2.11.2 | Grayhill keypad config: Missing save to EEPROM (non-volatile memory) of configuration data added. |
| 2025-12-14 | 2.12.0 | CAN Export Loop back option added. New page 13 on CAN Export 5 (analog voltage + new status byte). Custom CAN Export messages (on CAN Export 1). Note: This update require read + update + write procedure. |
| 2026-01-02 | 2.12.4 | Bug fix / updates of new Custom CAN Export message feature. Bug fix / updates of Blink Marine keypad support. |
| 2026-01-02 | 2.12.5 | Bug fix, Blink Marine keypad: Read/Write names of key 6..12 Blink Marine keypad: List of Output status signals reduced to outputs only. |
| 2026-01-12 | 2.12.6 | Internal error when "Overview 2" displayed and HP9642 keypad selected and both units disabled. |
| 2026-01-26 | 2.12.8 | Missing update of CAN Export 5 for HP8443 variant info page fixed. |
| 2026-02-01 | 2.12.9 | 100kbit CAN bitrate added. |

3) Update Procedure: Read + Update + Write

Some updates involve change in internal data structure.

To preserve configuration data, the following update sequence must be followed:

- 1) Using current PCTool and firmware, read configuration data from HP8442/HP8443 to PC, and save file.
- 2) Install new PCTool.
- 3) Firmware update HP8442 / HP8443.
- 4) Perform "Default settings" (from File menu).
- 5) Load configuration file.
- 6) Write configuration data to HP8442 / HP8443.

In short: Format of configuration file saved / loaded on PC is normally both backward and forward compatible.

Important: During update may outputs turn On. To prevent unwanted behavior, always disconnect +12V main supply and/or both AMP connectors.