

# MIC3+ Ignition Controllers

## New Firmware – Release 1.14.0



From now on MOTORTECH delivers all MIC3+ ignition controllers with the new firmware 1.14.0.

Firmware 1.14.0 is a release for all MOTORTECH ignition controllers of the MIC3+ series. In order to operate the MIC3+ ignition controllers with firmware 1.14.0, MICT 2.33.00000 or higher must be installed on your PC.

In order to update the MIC3+ ignition controllers, please read the latest operating manual which is available for download at [www.motortech.de](http://www.motortech.de). Check your settings prior to starting your engine.

### Download

The new firmware for your device, all current operating manuals and the MICT at least required for operation can be downloaded at the following address (160 MB):

<https://www.motortech.biz/downloads/MOTORTECH-SoftwarePackage-MIC3plus-FW-1-14-0.zip>

### New Functions and Modifications

**Release 1.14.0 – 2023-01-24**

**Test Release 1.13.00000 – 2021-08-24**

› The algorithms for pickup synchronization have been improved to reduce synchronization time.

**Release 1.12.2 – 2021-06-28**

› Bugfix: Implemented a workaround for a problem reading the microcontroller's Time Base Register that sporadically caused CAN communication to be temporarily suspended.

› Bugfix: An error in the parameterization of the CAN hardware was corrected.

**Release 1.12.1 – 2020-07-28**

› The temperature thresholds were increased by 5 K in each case.

**Release 1.12.0 – 2019-07-15**

› The blinking behavior of the pickup LEDs (*Pickup 1* to *Pickup 2*) has been revised.

› The blinking behavior of the LED *Status* has been revised.

› An error has been fixed that could lead to a failed assertion when the following configuration was made:

‣ In addition to a type N disc, another disk with more than one event (N, N+1, N-1, etc.) was assigned to the camshaft.

‣ The N disc was not assigned to the pickup input with the lowest input number.

› Bugfix: An error was fixed that caused wrong results in the calculation of the output energy for two-stroke engines.

**Test Release 1.9.00000 – 2018-02-21**

- › Bugfix: In systems with only one N-2 disc on the camshaft, an incorrect timer was used when checking the pickup signals.
- › New J1939 function: A configurable address filter can be set so that broadcast PGNs are only accepted from one or two specific source addresses. If the filter is deactivated, the broadcast PGNs are accepted from all source addresses.
- › New J1939 Tx-PGN 0xF004: *Electronic Engine Controller 1* for transmitting the current speed
- › The period of the J1939 task was reduced from 10 ms to 5 ms to achieve more precise transmission times.

**Test Release 1.7.00001 – 2017-09-20**

- › Extended info message: *Firing enabled (Start/Stop In: x, CAN y, RS485: z, speed: s RPM)*
- › Extended info message: *Firing disabled (Start/Stop In: x, CAN y, RS485: z, speed: s RPM)*
- › Bugfix: An error was fixed that, on systems with an N-1 disc each on camshaft and crankshaft, lead to a pickup signal loss on the crankshaft not being recognized.
- › Bugfix: Fixed an error regarding the transmission of the pre-trigger voltage and the auxiliary supply voltages runtime data via CANopen and Modbus. In the event of a fault, the configured instead of the current measured values had been transmitted.
- › Bugfix: An error was fixed that could lead to a failed assertion when an invalidly configured alarm was triggered.
- › Changed behavior of status bit: *Cylinder Individual Timing Limited*  
The status bit is now additionally also set if the global ignition timing violates the global timing limits only due to an adjustment of a cylinder individual offset.
- › New CANopen object 0x2748: Runtime data *Minimum Spark Durations* with expanded range: 0 µs to 6553.5 µs, resolution: 0.1 µs
- › New CANopen object 0x274C: Runtime data *Energy Outputs* with expanded range: 0 mJ to 6553.5 mJ, resolution: 0.1 mJ
- › New version 10.0 of the CANopen EDS file
- › New Modbus register 0x2F90: Runtime data *Minimum Spark Durations* with expanded range: 0 µs to 6553.5 µs, resolution: 0.1 µs
- › New Modbus register 0x2FD0: Runtime data *Energy Outputs* with expanded range: 0 mJ to 6553.5 mJ, resolution: 0.1 mJ
- › New J1939 Tx-PGN 0xFEDA: Software Version
- › New J1939 Rx-PGN 0xDF00: Stop Start Broadcast (DM13)

**Release 1.6.0 – 2021-03-12****Test Release 1.5.00003 – 2021-01-08**

- ⓘ **Notice:** The following bugfix is only available in versions 1.5.0003, 1.6.0 and from version 1.12.2.
- › Bugfix: Implemented a workaround for a problem reading the microcontroller's Time Base Register that sporadically caused CAN communication to be temporarily suspended.
- ⓘ **Notice:** The following change is only available in versions 1.5.0003 and 1.6.0.
- › The instrumentation of the firmware, which monitors the runtime behavior of various software components involved in CAN communication, was adapted accordingly. Only if this monitoring fails, it generates info entries of

the form “unknown message code 12345x (...)” in the message list.

**Test Release 1.5.00002 – 2020-11-12**

**i Notice:** The following change is only available in versions 1.5.00002, 1.5.0003 and 1.6.0.

- › The firmware was instrumented to monitor the runtime behavior of various software components involved in CAN communication.

**Test Release 1.5.00001 – 2020-08-19**

**i Notice:** The following bugfix is only available in versions 1.5.00001, 1.5.00002, 1.5.0003, 1.6.0 and from version 1.12.2.

- › Bugfix: An error in the parameterization of the CAN hardware has been corrected.

**Test Release 1.5.00000 – 2016-02-29**

- › New info message: *Firing enabled (Start/Stop: x, CAN y, RS485: z)*
- › New info message: *Firing disabled (Start/Stop: x, CAN y, RS485: z)*

**Release 1.4.0 – 2015-12-15****Test Release 1.3.00000 – 2015-08-03**

- › Bugfix: An error has been fixed that could lead to a failed assertion at rapid acceleration of the engine.
- › New status bit: Cylinder Individual Timing Limited

**Release 1.2.1 – 2015-01-29**

- › Debouncing time of firmware option *Coding Switch* has been increased.

## Known Issues

**All Versions**

- › Pickup input types *N Magnets* and *Single Magnet* are not implemented in firmware.