

Release Notes - Cenon CAM 4.0.x

2017-04-04

1. Requirements

- 4.0.5: Mac OS X >= 10.6 (Snow Leopard) up to 10.12 (Sierra)
Computer: Intel 64 Bit, Intel 32 Bit
- 4.0.4: Mac OS X >= 10.5 (Leopard) up to 10.11 (El Capitan)
Computer: Intel 64 Bit, Intel 32 Bit
- 4.0.3: Mac OS X >= 10.5 (Leopard) up to 10.10 (Yosemite), [new App Id]
Computer: Intel 64 Bit, Intel 32 Bit
- 4.0.2: Mac OS X >= 10.5 (Leopard) up to 10.9 (Mavericks)
Computer: Intel 64 Bit, Intel 32 Bit
- 4.0.1: Mac OS X >= 10.5 (Leopard) up to 10.8 (Mountain Lion)
Computer: Intel 64 Bit or Intel 32 Bit
- 4.0.0: Mac OS X >= 10.4 (Tiger)
Computer: Intel 64 Bit, Intel 32 Bit, PPC

Warning:

! Users of Single Line Fonts (1Line) shouldn't update to Mac OS 10.10 - 10.12, until Apple has fixed an issue preventing certain characters from working !
However, the 2-Line Fonts work.

2. File Locations and Installation

Generally, it is good advice to make a copy of an Application, before installing a new version (Cenon.app -> Cenon-4.0.2.app). This way, you can always go back to the previous release, if necessary.

With version 4.0.3 Cenon received a new App-Id (com.Cenon). When installing Cenon 4.0.3 or higher the old database will be copied from "de.vhf.Cenon" to "com.Cenon". This way old and new versions remain working with the same defaults. When updating to Cenon 4.0.3, the installation creates a copy of an existing Version of Cenon (Cenon_old.app). To start Cenon the first time after the Installation, you have to start Cenon directly from the Application folder (not the Dock).

Version 4.0.3 creates a convenience link to the hidden User Library:
"Documents/Cenon" -> "Library/Application Support/Cenon"

With version 4.0.0 the location of the Cenon library folder (/Library/Cenon) moved to
"/Library/Application Support/Cenon".

With version 4.0.0 the device files can be located in sub-folders of the Devices/xyz path. When installing version 4.0., the old device folder inside the global library will be removed. However, devices installed by the User in his User-Library stay untouched.

3. Cenon-Files (.cenon)

The files written with Release 4.0 can be read by older Versions of Cenon (down to Version 3.6). However, some features including the features listed below, will be ignored:

- Coordinate Precision [increased in 4.0]
- Project Settings [new in 3.9.0]

4. Device Files ("Library/Application Support/Cenon/Devices/xyz/*.dev")

The following changes were made to the device files:

+ Tool Change controlled by Cenon

New in 4.0.4

```
Tool 1      #T01 "CMD get tool" "CMD remove tool"  
Tool 2      #T02 "CMD get tool" "CMD remove tool"  
...
```

If the commands above (#T01...) don't include gauging, gauging is needed in Cenon:

```
Measure Tool #TMZ "CMD Gauging" "Return Format"  
Measure Tool #TMZ "GV17550,30;GV,,3000;ME3,1,5,1,5000;GV,,0;" "ME3=%f"
```

+ Reference time (#RFT)

New in 4.0.4

```
adjustment drive time [s]      #RFT 30
```

+ Spindle (#RVU1)

New in 4.0.4

```
turn on spindle before lowering Z      #RVU 1
```

+ Arc Interpolation (#G02, #G03) New in 4.0.3

We added two new variations of the arc interpolation G-Codes (Gerber RS 274, NC). Besides the existing parameter sets X Y A B and R A B, parameters can be provided in the form X Y R and X Y I J.

```
arc cw (end x, end y, radius) #G02 "G2 X%.3f Y%.3f R%.3f\n"
arc ccw (end x, end y, radius) #G03 "G3 X%.3f Y%.3f R%.3f\n"
arc cw (end x, end y, offset x, offset y) #G02 "G2 X%.3f Y%.3f I%.3f J%.3f\n"
arc ccw (end x, end y, offset x, offset y) #G03 "G3 X%.3f Y%.3f I%.3f J%.3f\n"
```

+ Orientation of Origin Z (#ORZ) New in 4.0.3

The Origin Z can be located either with Z up (1 = Default) or Z down (0):

```
Z origin (0=down zero, 1=up zero) #ORZ 0
```

+ Safe Manual Tool Change (#TOS) Added in 4.0.0

For manual tool change, usually every Start of output will lift the Z axis to ask for the first tool, even if the tool is already in. This is a safety mechanism which can slow down work. If #TOS is set to 0, the manual tool change will not ask for a tool at Start, if the tool is selected already. Warning: make sure you only use one and the same magazine for all jobs. Warning: make sure you didn't change the tool without Cenon being aware of it.

```
safe manual tool change (default = 1) #TOS 1
```

+ Switch-Entries (#SW1, #SW2, #SW3, #SW4) Modified in 4.0.0 / 4.0.4

The Switch-Entries have been extended by two more parameters, allowing to set the title of the switch in the Control-Panel, and a flag to tell if the switch is safe. -> If the device entry is not updated, the old behavior remains.

- The switch entries expect the following parameters:
1. Command for switching ON
 2. Command for switching OFF
 3. Title of the switch, or "" to leave the default values.
 4. Flag: 1 = switch can be switched during output, 0 = switch is inactive during output.
 5. Flag: 1 = automatic switch, 0 = manual only [added in 4.0.4]

```
Examples:
Switch 1 #SW1 "Command On" "Command Off" "Spindle" 0 1
Switch 2 #SW2 "Command On" "Command Off" "Music" 1 0
```

In the Example it is not possible to turn off the Spindle while the machine is active, but it is possible to turn off the Music.

Up to 10 switches can be configured ("SW1" - "SW10") [added in 4.0.0]

The "#SW" entries can be mixed with the switch commands "#OS1" - "#OS4", for example to add titles to switches when using the old CNC 450 controller. [added in 4.0.0]

+ Camera Offset (#COF) Added in 3.9.0

If Camera-Gauging is used, you have to add the new Device-Entry "#COF" with the offset of the Camera. The offset is the distance of the camera relative to the tool. The tool being the origin. -> This entry needs to be added for Camera support only.

```
camera offset XY from tool (mm) #COF 60.0 5.0
```

5. Camera+Targeting Release 4.0.1

Camera+Targeting can run in 32 Bit or 64 Bit Mode: 32 Bit Mode is needed for Digitus Video-Grabber and VideoGlide Driver. 64 Bit can be used with certain new UVC Video-Grabber devices. No driver needs to be installed.

If you have a Digitus Video-Grabber/VideoGlide driver and a 64 Bit Computer, you need to start Cenon in 32 Bit Mode ! In Finder, select Cenon.app and pick "File -> Get Info" from the menu. In the inspector check "Open as 32-bit mode".

Bit	OS X	Camera+Technology
32	>= 10.5	QTCapture with VideoGlide Driver
32 / 64	>= 10.7	AVCapture with special Video Grabber

Warning: Users with the UCD-211 Video Grabber (black) can Upgrade to Mac OS Sierra, but need to upgrade to at least Mac OS 10.12.4.

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