Provided here are the print\_nmea functions used to seed the depth and time|position fields in elog. The scripts can be run from a command line and can either be compiled into an executable file or can be run if python 3.10+ is present on the running machine.

If running the python scripts use:

Debugging tool that prints any NMEA strings on the port

Usage: python print\_nmea.py port\_number

Example: python print\_nmea.py 4006

Tool for printing the NMEA string for depth

Usage: python print\_nmea\_depth.py port\_number nmea\_depth\_label

Example: python print\_nmea\_depth.py 4006 SDDBS

Tool for Time|Position string from a ZDA and GGA NMEA string.

Usage: python print\_nmea\_gps.py port\_number

Example: python print\_nmea\_gps.py 4006

If running the compiled script use:

Debugging tool that prints any NMEA strings on the port

Usage: print\_nmea.exe port\_number

Example: print\_nmea.exe 4006

Tool for printing the NMEA string for depth

Usage: print\_nmea\_depth.exe port\_number nmea\_depth\_label

Example: print\_nmea\_depth.exe 4006 SDDBS

Tool for time|position string from a ZDA and GGA NMEA string.

Usage: print\_nmea\_gps.exe port\_number

Example: print\_nmea\_gps.exe 4006

If python is installed on the elog machine, create a virtual machine in the elog directory, if it doesn’t already exist, and install the python packages.

Assuming requirements.txt, print\_nmea.py, print\_nmea\_depth.py and print\_nmea\_gps.py are in the C:\Dev\ELOG\scripts\ directory

Eg. Open a command line:  
C:\User\Field Laptop> CD C:\Dev\ELOG

C:\Dev\Elog> python -m venv env

C:\Dev\Elog> env\Scripts\activate

(env) C:\Dev\ELOG> python -m pip install -r scripts\requirements.txt

(env) C:\Dev\ELOG> elogd -x

Ensure the elog config uses the python commands, adjusting script inputs required

For Sounding:

Preset Sounding = $shell(python scripts\print\_nmea\_depth.py 7016 SDDBS -d 6.34 -t 8)

Preset on Reply Sounding = $shell(python scripts\print\_nmea\_depth.py 7016 SDDBS -d 6.34 -t 8)

For Time|Position:

Preset Time|Position = $shell(python scripts\print\_nmea\_gps.py 7006 -t 8)

Preset on reply Time|Position = $shell(python scripts\print\_nmea\_gps.py 7006 -t 8)

Subst Time|Position = $shell(python scripts\print\_nmea\_gps.py 7006 -t 8)

Subst on reply Time|Position = $shell(python scripts\print\_nmea\_gps.py 7006 -t 8)

If using the compiled executables ensure print\_nmea.exe, print\_nmea\_depth.exe and print\_nmea\_gps.exe are in the C:\Dev\ELOG\scripts\ directory and use the following commands in the elog.config file:

For Sounding:

Preset Sounding = $shell(scripts\print\_nmea\_depth.exe 7016 SDDBS -d 6.34 -t 8)

Preset on Reply Sounding = $shell(scripts\print\_nmea\_depth.exe 7016 SDDBS -d 6.34 -t 8)

For Time|Position:

Preset Time|Position = $shell(scripts\print\_nmea\_gps.exe 7006 -t 8)

Preset on reply Time|Position = $shell(scripts\print\_nmea\_gps.exe 7006 -t 8)

Subst Time|Position = $shell(scripts\print\_nmea\_gps.exe 7006 -t 8)

Subst on reply Time|Position = $shell(scripts\print\_nmea\_gps.exe 7006 -t 8)

To compile the python scripts:

One of the packages installed with the requirements.txt file is pyinstaller, which allows python scripts to be compiled into executables.

To setup for python development:

1. Create a virtual environment
2. Activate virtual environment
3. Make and test updates to python code
4. Compile updates
5. Place updated scripts in the Elog scripts directory
6. Create a virtual environment:  
   In the source code directory open a command window and use the command:  
   > python -m venv env
7. Activate virtual environment:  
   In the command window use the command:  
   > env\scripts\activate
8. Make and test updates to scripts
9. Compile Updates:  
   In the command window use the command for the executable being created:  
   > pyinstaller -F print\_nmea.py  
   > pyinstaller -F print\_nmea\_depth.py  
   > pyinstaller -F print\_nmea\_gps.py
10. The executables will be placed in a dist\ directory. Copy them to the Elog scripts directory.