BUILD LINUXCNC 2.9 RIP FROM SOURCE

This step by step procedure assumes you have installed Debian bookworm Real time with XFCE desktop environment

Getting Computer Ready

```
sudo apt update
sudo apt upgrade
```

install Linuxcnc dependencies

```
Sudo apt install –y debhelper-compat dh-python libudev-dev docbook-xsl asciidoc imagemagick asciidoc-dblatex autoconf automake bwidget gettext intltool libboost-python-dev libepoxy-dev libgl-dev libgl1-mesa-dev libglu1-mesa-dev libgtk2.0-dev libgtk-3-dev libmodbus-dev libgpiod-dev libeditreadline-dev libusb-1.0-0-dev libxmu-dev po4a psmisc python3-dev python3-tk python3-xlib tcl8.6-dev tk8.6-dev xvfb yapps2 dblatex dvipng fonts-dejavu graphviz groff inkscape python3-lxml source-highlight texlive-extra-utils texlive-font-utils texlive-fonts-recommended texlive-lang-cyrillic texlive-lang-european texlive-lang-french texlive-lang-german texlive-lang-polish texlive-lang-spanish texlive-latex-recommended w3c-linkchecker xsltproc texlive-xetex
```

FROM YOUR HOME DIRECTORY:

```
cd ~
```

Create working directory

```
mkdir dev
cd dev
```

Install git if you have not installed it yet.

```
sudo apt install git-all
```

Download LinuxCNC source

```
git clone https://github.com/linuxcnc/linuxcnc.git
```

Switch branch to Ver 2.9

Note: At this stage LinuxCNC git is pointing to master which is 2.10. To clone LinuxCNC 2.9 issue following cmd

```
cd linuxcnc
git checkout 2.9
```

COMPILING LINUXCNC FOR RUN IN PLACE RIP MODE

```
cd ~/dev/linuxcnc/src
./autogen.sh
./configure --with-realtime=uspace
make -j$(nproc)
```

SETUID IS A LINUX FILE PERMISSION SETTING THAT ALLOWS A USER TO EXECUTE FILE PROGRAM WITH THE PERMISSION OF THE OWNER OF THAT FILE

```
sudo make setuid
```

RUN IN PLACE NEEDS TO SOURCE THE ENVIRONMENT BEFORE RUNNING ANY OF THE LINUXCNC SOFTWARE.

Note: This command must be issued every time a new shell is open.

```
cd ~
source ~/dev/linuxcnc/scripts/rip-environment
```

RUN LINUXCNC

```
linuxcnc
```

#DONE