Manual configuration of the CDP system
from the command line (Terminal).

For Users of Mac OS X 10.8 (Mountain Lion) and later. These instructions apply to the 8.0 release (2023), and also earlier 7.1 upgrades (2016+) to the CDP programs. With this update, the old environment variable CDP_SOUND_EXT defaults to .wav and no longer has to be set during installation. These instructions may also be useful for users planning to build and run the programs in Linux.

There are two, possibly three tasks:

1. Add the path to the CDP programs to your PATH environment variable.
2. For Soundloom, Create the hidden file *.sloomrc* if not already installed.
3 Optional: to enable a newly downloaded copy of Soundloom, you may also need to configure OS X to bypass "Gatekeeper", which only allows apps from Apple-certified sources such as the App Store to run.

Steps 1 and 2 involve either creating or editing text files. For this any suitable text editor can be used, e.g. TextEdit. In the instructions that follow, a few standard unix shell commands are used, such as `cp` to copy a file, and `cd` to change directory. Note that spaces are very important in these and other shell commands: they separate one component of a command from another, such as source file path and destination path.

It is recommended that (especially for users relatively new to using Terminal) that you read through this document in full before starting to make changes.

1. Add the CDP path to your personal Environment.

This step is required if you wish to call CDP programs from the command line (Terminal). The Terminal program *Terminal.app* can be found in the *Utilities* directory inside the */Applications* directory. You will want to drag this to the Dock for convenience, if you have not already done so.

Here it is assumed that the CDP programs are installed in the standard location:
`~/cdpr8/_cdp/_cdprogs`

where the tilde character ~ is the standard shorthand for your home directory. This is also represented by the standard environment variable `HOME`.

(a) If using the bash shell.

The bash shell is the OS default for all versions of OS X up to and including 10.14 (Mojave). The selected shell name is shown on the Terminal window title bar.

Open a new Terminal session: it will start in your home directory. If you are using an already opened Terminal session, you may need to change back to your home directory – use the tilde character for this:

`cd ~`

(followed by Enter)

Check your environment by typing the command `env` followed
by the Enter key (as for all Terminal commands):

```
env
```

This will print a list of all the current environment variables, including `HOME` and
`PATH`. If `PATH` already includes the above CDP path, we are good to go. If not, we
need to either edit or create the file *.bash_profile*. We can place commands in this
file to update user-level environment variables. Because the file name has a dot
prefix, it is a "hidden file"– it will not appear in a simple directory listing using the
command `ls`. It will also not appear in a Finder window.

We need to add at least the `-a` flag command to `ls` (note the space between `ls`
and `-a`) to show all files, including hidden ones:

```
ls -a
```

This will give a simple filename and directory name listing.

Alternatively we can also ask for details of each file, by adding the `-l` (ell) flag:

```
ls -la
```

If *.bash_profile* exists, it will now appear in the listing.

We can open a hidden text file from the command line by using the standard
"open" command, optionally giving it the name of the App to use:

```
open -a TextEdit .bash_profile
```

If the file exists, it will open in TextEdit; otherwise an error message will be
printed to the effect that the file cannot be found. In which case, just open
TextEdit by itself, either by double-clicking, or from Terminal:

```
open -a TextEdit
```

If *.bash_profile* does not exist:

in a new TextEdit file, add the lines:

```
PATH=$HOME/cdpr8/_cdp/_cdprogs:$PATH
export PATH
```

Then Save As *.bash_profile*. Note the initial dot character here – this is what
marks the file as hidden.

NB: if checked, uncheck the option to add a .txt extension if none is provided.
TextEdit will warn that you are saving a file which will be hidden; just ignore this

warning and save.

To make the new `PATH` active, you need to close the Terminal session and start a new one, as that is when config files such as *.bash_profile* are read. Typing `env` should now show the updated `PATH`, and typing the name of any CDP program, such as *dirsf* or *paplay*, will run the program and display a message.

(b) if using the zsh shell.

The zsh shell became the default shell with the release of OS X Catalina (10.15).

These must be regarded as preliminary notes, until we, and CDP users generally, have had more experience with the Z shell and its configuration options. Users already familiar with the bash shell (including, for example, frequent use of its 'history' facility (recalling commands between sessions) which is inactive by default in the z shell) may well prefer to switch back to the bash shell. This can be done via Terminal Preferences.

The primary difference from the bash shell is that instead of using *.bash_profile* for user configurations it uses the file *.zshenv*. The procedure is very similar to the steps above, but the differences are important.

Open the (hidden) text file *.zshenv* in TextEdit, (see above) or create it if it does not exist.

Add the statements:
```
    path=('$HOME/cdpr8/_cdp/_cdprogs' $path)
    export PATH
```

Save the file.

NB you can save to a plain name first such as *zshenv.txt*. Then, in Terminal, copy to the required hidden filename:

```
    cp zshenv.txt .zshenv
```

2. create *.sloomrc*.

If this has not been installed by the CDP installer package, it will need to be created. It is a hidden text file in your home directory, and contains the path to the CDP system directory `_cdp`.   It is read by Soundloom when it launches. This enables Soundloom.app to be placed directly into the /Applications directory.

Note for existing users: this file may currently point to your existing */cdpr7* directory. All current Soundloom settings including for the Workspace are stored here (inside the _cdp directory). Only make this change if you are happy to perform a full install of Release 8, including a full "first use" install of Soundloom, which in effect will reset all current settings to the minimal default for a new system. See the *README.txt* file supplied with the new Release8 Disk

Image for more information.

Follow the same procedure described for *.bash_profile*: create the text file *.sloomrc* and add a line containing the explicit path to the _cdp folder. Assuming your user account is called *wxyz*, the line should contain:

```
/Users/wxyz/cdpr8/_cdp
```

Save the file into your home directory.

3. **Bypass OS X Gatekeeper security settings**.

With each iteration of OS X from Mountain Lion onwards, Apple have made it progressively harder for users to access un-certificated downloaded applications, such as those coming from the Open Source/Free Software community.

The problem typically manifests when trying to launch a newly downloaded application whether directly or via the Dock. At the point of downloading a new app, the OS places it on a "quarantine list". An alarming error message is displayed indicating the application is "damaged", or from an unidentified developer, and has been prevented from running.

A standard workaround for a single application is to launch the application using "Open" from the menu that pops up using Right-Click (or Ctrl-Click) on the application's icon. The error message changes to a simple warning, which can be ignored. Once opened for the first time in this way (which removes the app from the quarantine list), the application will launch as usual thereafter.

In OS X versions prior to Sierra (10.12), it was also possible (with Administrator privileges) to perform a more general solution, by opening System Preferences -> Security & Privacy. This offered three choices for permitted Applications:
- App Store
- App Store and identified developers
- From Anywhere.

With Sierra, the last option is absent by default. It can be restored using the Terminal command below:

```
sudo spctl --master-disable
```

This will ask for your Admin password.
There is no need to reboot; open System Preferences again and the new option should be present

With OS versions 10.12 and later, this method is deprecated and may not be available. Similarly, the Ctrl-click approach described above may no longer work. It is possible to remove an individual application from quarantine by using this command from Terminal (assuming Soundloom.app has been placed in /Applications):

```
xattr -rc /Applications/Soundloom.app
```

This command is also required to enable any downloaded shell scripts (with the .command file extension) to run.

Users on Catalina and later will already have had to use this command to unlock and open the downloaded CDP installer packages.

CDP Forum

Updates and revisions to the information presented here (e.g. when the next version of OS X is released) will be posted on the CDP Forum ("Mac Installation"):

http://unstablesound.net/cdpforum/