How to get started with sound in R

To handle sound in R, tuneR package must be installed. The directions as follow.

[Linux]

1. Download the tuneR package(**tuneR_0.2-1.tar.gz**) from the R project website.
   (one of the mirror sites: http://cran.cnr.berkeley.edu/src/contrib/Descriptions/tuneR.html)
2. Uncompress and untar the file with **tar xvfz tuneR_0.2-1.tar.gz** in an appropriate location.
3. Install the package with **R CMD INSTALL tuneR/** from the command line. You either need to be in the directory where tuneR has been untarred, or specify the full path and filename for tuneR to do this.
4. To invoke the R program, just type **R** from the command line.
5. Before you handle sound, always load tuneR library:
   library(tuneR)

[Mac]

1. Launch R.
2. Type **install.packages()** (or use the menu command equivalent)
3. In the Install dialog, apparently the defaults sometimes work. If they don't, choose:
   * Other Repository
   * In Other Location
   * Get List

   Then select **tuneR** from the list and click **Install Selected**.
4. Before you handle sound, always load tuneR library:
   library(tuneR)

[Windows]

1. Launch R.
2. Choose **Packages** from the menu, and **Install Packages**.
3. Select one of the mirror sites, then **tuneR** package from the package list. Installation is automatically done.
4. Before you handle sound, always load tuneR library:
   library(tuneR)

How to use play() function in R

[Linux] Assign a file or a wave variable with the player in play() function.

Example:

```
>library(tuneR)                          #load tuenR package
>#play “mywave.wav” file located in the current directory
>play(“mywave.wav”, “play”)              #play the file by the player, 'play'
>
>#make a simple sine wave and play
>t = seq(0, 3, 1/8000)                   #times in seconds if sample for 3 seconds at 8000Hz
>u = (2^15-1)*sin(2*pi*440*t)            #440 Hz sine wave that lasts t length seconds (here, 3 seconds)
>w = Wave(u, samp.rate = 8000, bit=16) #make the wave variable
>play(w, "play")                         #play the wave data by the player, 'play'
```

[Mac] Set the wave player before giving the play() function. Then, play a file or a wave variable.

Example:

```
>library(tuneR)                          #load tuenR package
>#Player works, but gives error messages, makes you hit the escape key to continue, and leaves
>#a new copy of the QuickTime Player open each time you use it (There must be a better way!).
>setWavPlayer("/Applications/'QuickTime Player.app'/Contents/MacOS/'QuickTime Player'")
>setwd("Desktop")                        #set the working directory
>
>play("mywave.wav")                      # play the wave file located in "Desktop" by QuickTime Player
>
>#make a simple sine wave and play
>t = seq(0, 3, 1/8000)                   #times in seconds if sample for 3 seconds at 8000Hz
>u = (2^15-1)*sin(2*pi*440*t)            #440 Hz sine wave that lasts t length seconds (here, 3 seconds)
>w = Wave(u, samp.rate = 8000, bit=16) #make the wave variable
>play(w)                                 #play the wave data by the assigned player, QuickTime Player
```

[Windows] Assign a file or a wave variable without a specific player. The default player will be assigned automatically and play the file or the wave data.

Examples:

```
>library(tuneR)                          #load tuenR package
>setwd(""E:/I546/homework")              #set the working directory
>
>play("mywave.wav")                      #play the wave file by a default player
>
>#make a simple sine wave and play
>t = seq(0, 3, 1/8000)                   #times in seconds if sample for 3 seconds at 8000Hz
>u = (2^15-1)*sin(2*pi*440*t)            #440 Hz sine wave that lasts t length seconds (here, 3 seconds)
>w = Wave(u, samp.rate = 8000, bit=16) #make the wave variable
>play(w)                                 #play the wave data by the default player
```