

**Physics of Music**  
**Lab Activity**  
**Estimating the Reverberation Time ( $RT_{60}$ ) for Knopper's Hall**

In this simple activity you will participate in data collection that will enable us to estimate the  $RT_{60}$  for Knopper's Hall. When finished you should be able to explain what  $RT_{60}$  means, how it is measured and what the particular  $RT_{60}$  value is for Knopper's Hall at The King's University.

**Data Collection**

We will set up a computer interface and Sound Intensity Level meter to record test sounds. These sounds will consist of:

1. A loud impulsive sound
2. Human Voice
3. Musical Note

**Data Analysis**

You will access the data that we collected from the [course web site](#). Each file will be an Excel spreadsheet file with time and SIL (in dB) data. You are expected to plot this data and from your plot estimate the  $RT_{60}$  value for the hall.

**What to Hand In**

Please hand in a properly labeled graph for each data set as well as your explanation of what you think is a good estimate for the reverberation time for the hall.

What do we mean by  $RT_{60}$  and how did you estimate it? Does your value of  $RT_{60}$  "agree" with your experience of what the hall sounds like?

Due Date: Tuesday, April 9