

**Basics of Audio by Barbara Freedman**  
**Author of *Teaching Music Through Composition: A Curriculum Using Technology***  
**Oxford University Press, 2013**  
<http://MusicEdTech.com>  
**“Teach music. The technology will follow.”**

**Basic Definitions:**

Panning: moving sound across a linear spectrum, right to left ear

EQ: equalization: manipulation of specific frequencies or ranges of frequencies

Frequency: how often sound waves per second, measured in Hertz or kiloHertz (Hz or kHz), pitch

Amplitude: Height of the sound wave, volume

Compression: reduction of amplitude (volume) of sound waves above a specified level. Reduces dynamic contract so louder sections can be made softer and softer sections can be made louder.

Reverb (reverberation): as an effect, simulates a room

**Sites for Information:**

Propeller Head Record U : [http://www.propellerheads.se/substance/record-u/index.cfm?fuseaction=display\\_main](http://www.propellerheads.se/substance/record-u/index.cfm?fuseaction=display_main)

PreSonus Learn: <http://www.presonus.com/community/learn>

Rode University: <http://www.youtube.com/rodemicrophones>

Five Minutes to a Better Mix: <http://therecordingrevolution.com/5minutes/>

**Articles:**

Tips on Clarifying Your Sonic Imagery: [http://tweakheadz.com/pan\\_control.htm](http://tweakheadz.com/pan_control.htm)

The Music Mixing Process: <http://www.music-production-guide.com/music-mixing.html>

The Art of Panning: <http://www.teachmeaudio.com/production/mixing/4-techniques/11-art-of-panning>

Basic Guide to Understanding EQ: <http://www.bhphotovideo.com/find/newsLetter/Understanding-EQ.jsp>

Learn EQ by PreSonus: <http://www.presonus.com/community/Learn/Equalizer-Terms-and-Tips>

What is Compression: <http://aidermusic.com/compression-pt-12-what-is-a-compressor-199>

Dynamics Processing by PreSonus: <http://www.presonus.com/community/Learn/Dynamics-Processing-Terms-and-Tips>

**Books:**

*The Art of Mixing: A Visual Guide to Recording, Engineering, and Production* by David Gibson published by ArtistPro Publishing

*The Mixing Engineer's Handbook* by Bobby Owsinski published by Thompson Course Technology

*Audio Mixing Boot Camp: Hands-On Basic Training for Musicians* (Book & DVD) by Bobby Owsinski published by Alfred Publishing

**Courses:**

Berklee School of Music: <http://online.berklee.edu/courses/live-sound-mixing-and-recording>

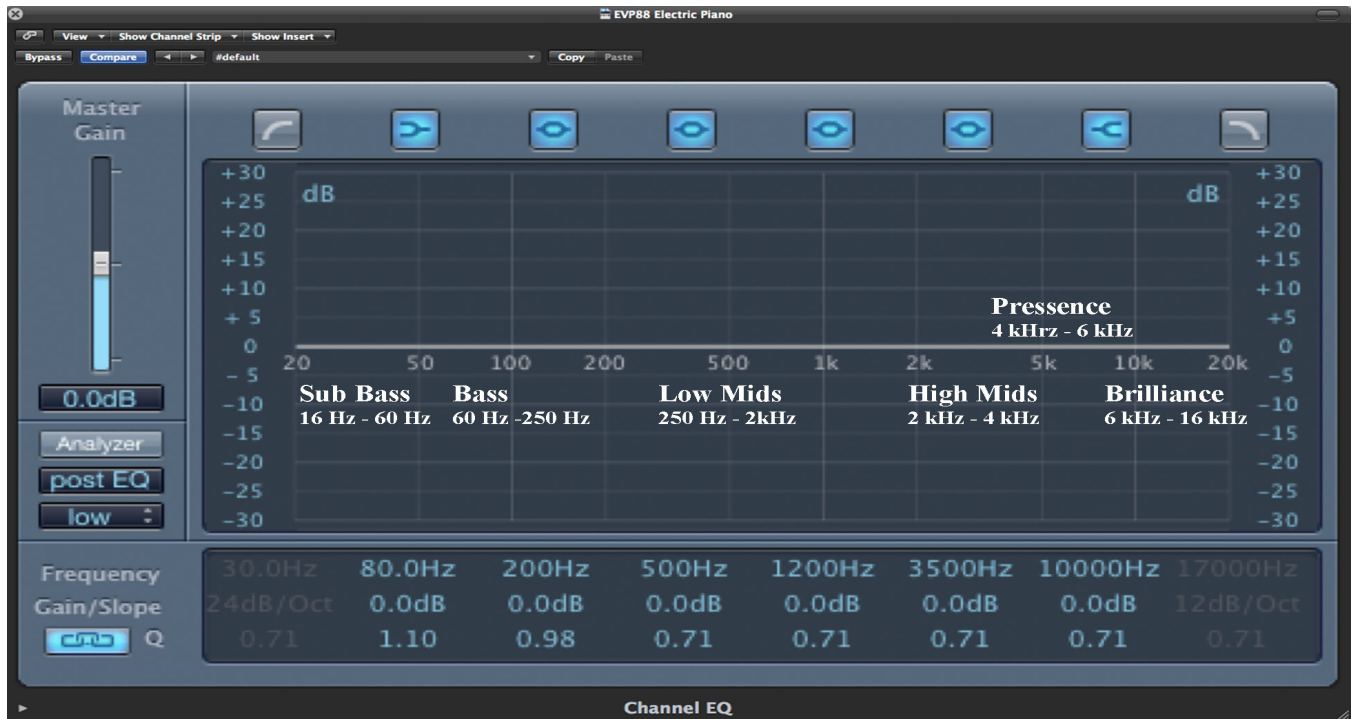
Dubspot: <http://www.dubspot.com>

Point Blank: <http://www.pointblanklondon.com>

Macprovideo.com: <http://www.macprovideo.com>

Groove3: <https://www.groove3.com>

Handout by Barbara Freedman [barb@musicedtech.com](mailto:barb@musicedtech.com) <http://MusicEdTech.com>



**Download the resources from this session at:**

<http://musicedtech.com/tmea-2018/>

**Please contact me for the following services:**

Consulting:

- Curriculum development
- Building and outfitting labs & studios

Professional development, faculty workshops, and online courses:

- Technology integration training for general education teachers including Google products integration and Learning Management Systems including Schoology, Canvas, Moodle, and Blackboard
- Technology integration and training for music teachers including specific software
- Music composition for grades 5 – 12 educators
- Audio engineering for music educators
- Please ask me to develop a workshop for your district's needs!