

project: sound tells a story. pure sound or web design project. it should go somewhere. can have narrative. start collecting sounds.

Henry Schaeffer

"musique concrete"

LOOPING technique  
literally physically looped the magnetic tape. 1948.

he made soundtracks for early surrealist french films.

adj volume 100% or lower if distortion gain - just til touches red.

volume mono, cd - stereo 44,100

- figure out gain in SoundForge

- Pro Tools - multitrack program  
go back & forth between SoundForge & Pro Tools

- sound cards much better in macs - pro studios all mac.

Today practice using mixer & microphone

Lec 2

wed 1/24/01

Simple Mixer parts:

- input stage
- EQ (on/off)
- Send/return (Fx)
- PAN L/R 5/50, later

- Gain Staging
- gain control
- freq dep gain
- L100/0 (left)
- LR Channel Dep Gain

GAIN (CH)  
 MASTER GAIN/MAIN

often pros leave EQ off & rely on good mics, orig sound quality

Fx done later usually

DRY sound recording

level indicator - red flashes or none only

ANALOG TAPE

NOISE  
 HIGH GAIN  
 Signal to noise ratio

DIGITAL MEDIA  
 circuitry produces some internal noise

Dynamic range  
 0 - 98 db  
 ↳ tape can be higher

lower range db  
 lower bit depth  
 because doesn't need the bits so quiet recording will yield poorer quality. so increase gain to record

BIT DEPTH  
 Low → High

Lec 2


Wed

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Freeway Melody - ambient music by Tim  
on compilation CD.

MICROPHONES - 2 main types

Dynamic - higher signal, good power

sound )))  - less expensive, lower quality.  
magnet

Condenser - low signal, needs  
external power.

Industry standard microphones:

SURE SM58 - voice, built in windscreen

SM57 - instruments, no  $\pi$

- less low frequency response

frequency curve of response  
flat

sound travels 1130 ft/sec (temp, humidity)  
effect

human 20 Hz - 20,000 Hz  
cps - cycles per second

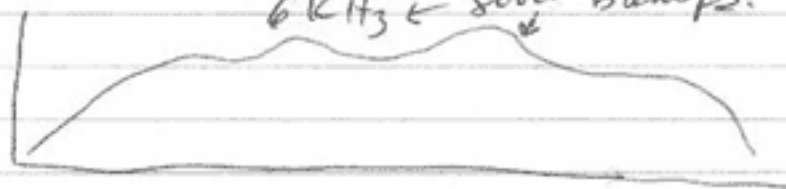
20 Hz waveform  $\rightarrow$  +50 ft long!

20,000 Hz " " "  $\frac{1}{8}$ " long.

60 Hz - 12,000 Hz range a decent  
microphone can record

5 - 60,000 Hz Swedish (expensive) mic

6 kHz  $\leftarrow$  good bumps.



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all microphones have PROXIMITY EFFECT.  
CLOSE = MORE BASS.


- more bass w/ mouth close to microphone  
lose bass w/ increasing distance

VOL change SQ of DISTANCE

MIC PATTERN


OMNI 

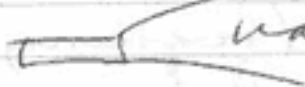
- picks up in all directions.  
- good for environment  
- subtle microphone

CARDIO 



HYPERCARDIO

 this area not recorded  
- used more

shotgun microphone  narrow



sounds focused to microphone

parabolic bowl microphone.

off axis, recording w/ mouth  
away from microphone.

PRE AMP - boosts microphone  
signal for recorder.

Lec 2

wed 1/24/01

audio cables have 3 wires XLR  
+ per channel. ↓  
- noise canceling  
bal

above is professional type

Assignment 2: write out an idea  
for a sonic story  
web page? CD mp3,  
video for film?  
voice, ambient, music.

→ Change, taking someone somewhere,  
part 2: collect sounds for this  
project.

- ⇒ length: 1 min to full CD length  
- put all into folders w/ name  
& drop  
- find sounds on Napster as well.  
- get MP3 converter.

format: 44.1 } CD quality sound  
16 bit }  
AIFF }  
↳ audio interchange file format.

Koblo, Grain Wave - mac only, synthesizer  
software from download.com.

4:30 - 6: in office  
6 - 7 pm: here in lab.

Digital Noise