

# Getting a good recording of a sermon

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**ROCK-tech Training Series**

**The challenge is to get a good quality clear recording that sounds like the person speaking and doesn't distract the listener.**

# What do we have to overcome to meet that challenge?

Noise

Pops, “esses” and unintelligibility

Large range in volume (from a stage whisper to shouting exuberantly)

Possibility of a wide range of sources

# Background noise can be good or bad.

## *Bad:*

External noise (road, trains, aircraft, children playing, etc)

Internal noise (creche, kitchen, etc)

Hums, buzzes and hisses

Other mics left “open” (i.e. on)

# Noise problems can often be solved practically.

Get the gain structure right

Don't leave mics open. Consider using a group or a post fade aux send.

Get a decent pair of headphones and monitor the right output.

Hums and buzzes can be solved by being prepared!

# Pops, esses and unintelligibility - EQ issues

Pick the right microphone

Mic placement/technique is important too

Make it sound natural - don't over-use EQ

# Selecting the wrong microphone can have a big impact on your recording.

Head Worn Microphone

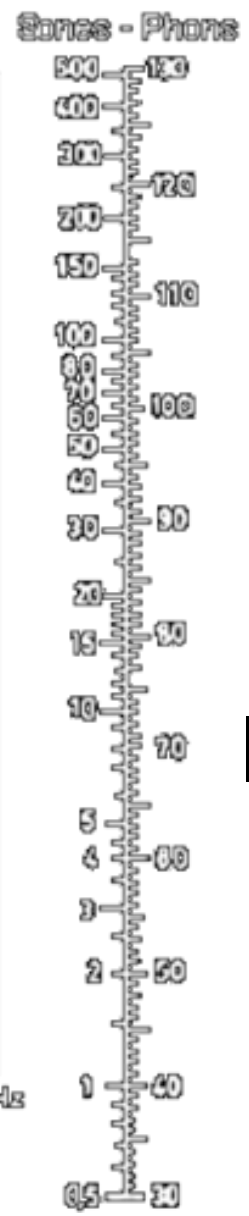
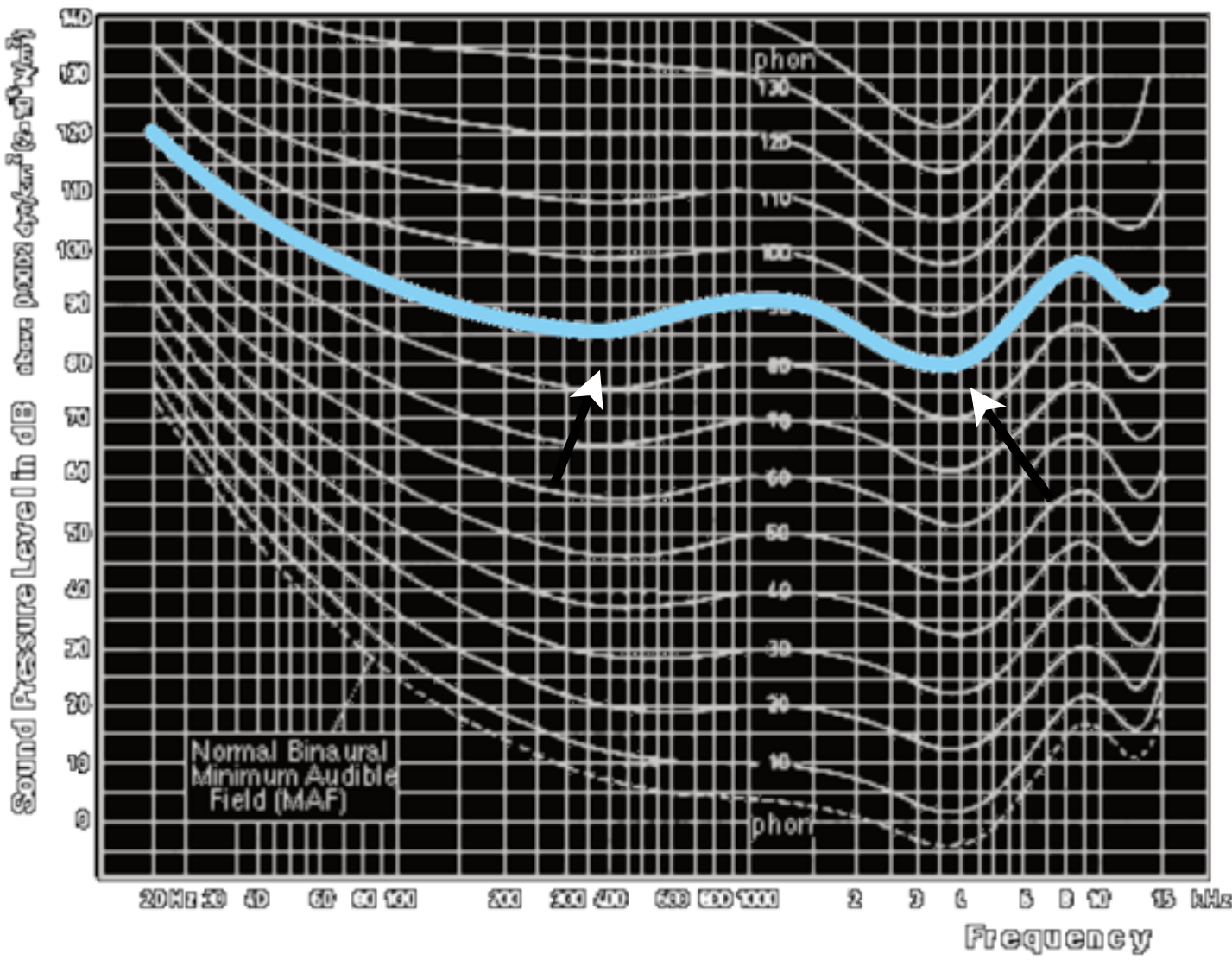
Hand Held Microphone

Lavalier / Tie Clip Microphone

Lectern Microphone

# **EQ and the human voice**





**Power:  
150Hz to  
800Hz**

**Intelligibility:  
2KHz to  
6KHz**

# Vocal EQ tips - there is no 'one size fits all'!

Trust your ears.

Roll off low frequencies / High Pass filter to correct for boominess, but don't remove too much or you will lose power.

Boost between 2KHz and 5Khz to increase intelligibility.

Boost between 4KHz to 10Khz to add 'brightness'/'air' (Good for people who mumble)

Beware the Hissy Snake of Ssssibilance, who lives between 5Khz and 7Khz!

# Getting the right volume - dynamic issues

**Correct Gain Structure.**

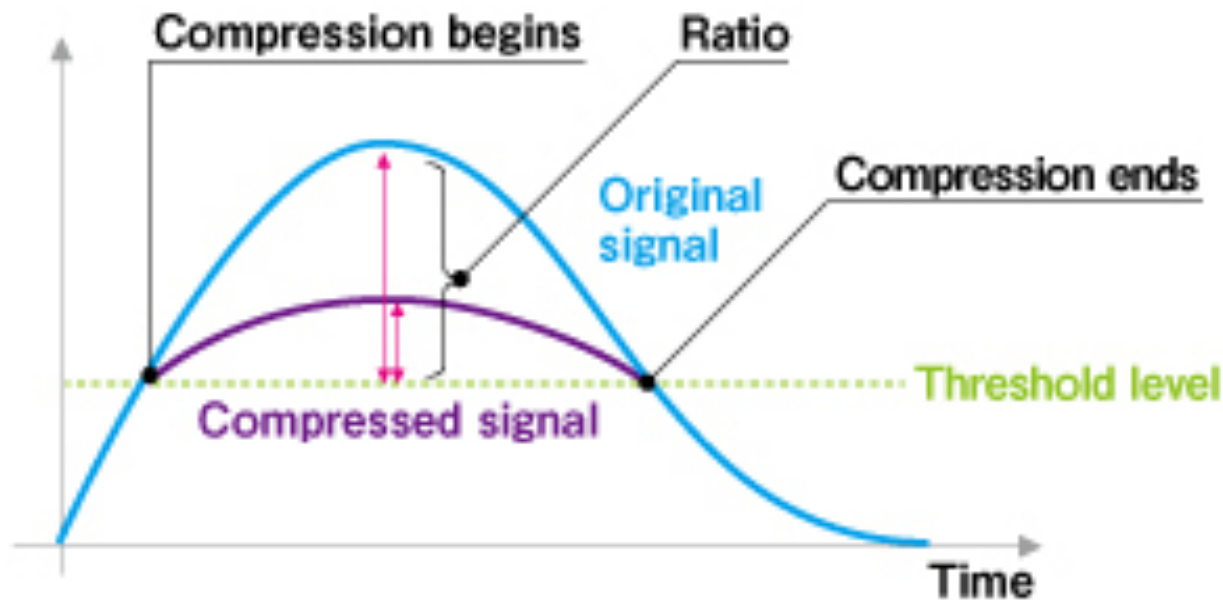
**Ideally you need a dedicated output - aux, group out, matrix etc**

Choose which inputs to route to it.

**Duplicate channel allows separate EQ for recording**

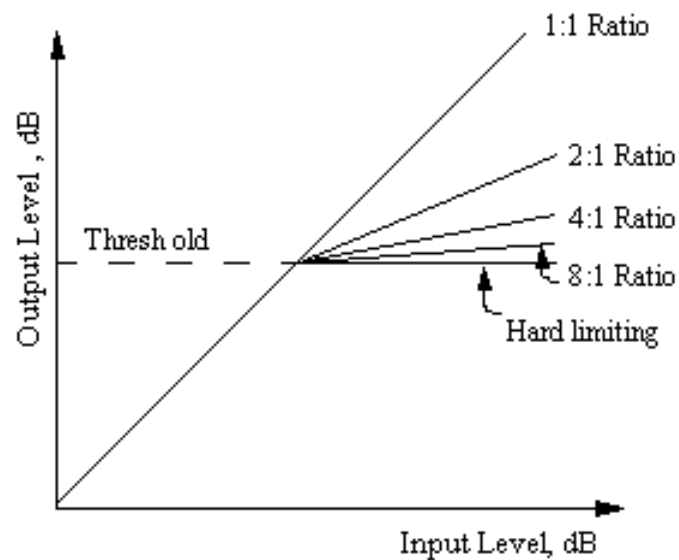
**Use a compressor, either on the separate channel, or the output (or perhaps both)**

Reducing the volume of loud noises (like a shout) reduces the overall dynamic range.

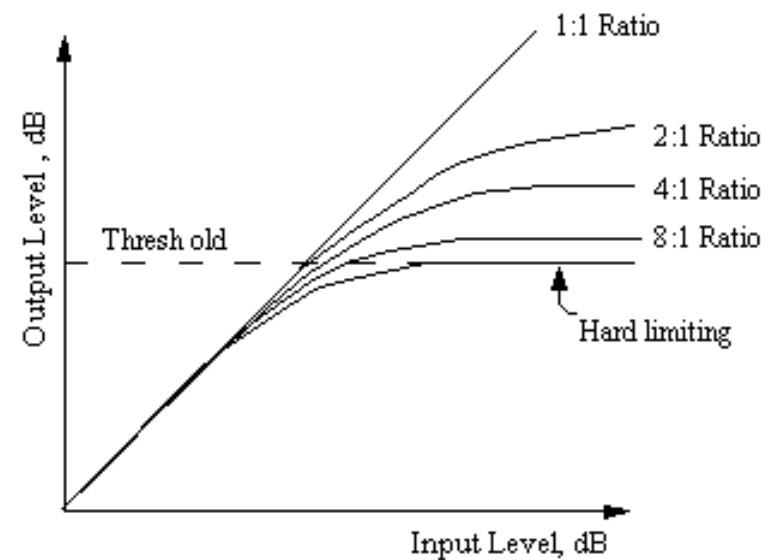


You'll need to add "makeup gain" to compensate for the reduced maximum level.

# A compressor automatically reduces the gain when the volume gets loud.



**Hard-Knee Compression**



**Soft-Knee Compression**

# Compressors - Hints



Use a “soft knee” setting to keep it sounding natural.

If you have to use a hard knee, don't use as large a compression ratio.

Set the threshold at about 6 to 10 db from the peak input.

Use a ratio between 2:1 and 4:1. Above 5:1 will be noticeable.

Use 2ms Attack time. More than 5ms will sound unnatural, and less than 1ms will sound too compressed.

Use 12ms Release time. More than 15ms will give a pumping effect, and less than 10ms will sound unnatural.

Use the makeup gain to match the output level to the input level.

**Compression can cause feedback if used live as well as for recording!**

# Including everything you need

Other speakers

Video/song playback

Congregation (laughing at a joke)

Background music (altar call/summing up)

# If there are other people speaking/contributing

Make sure you know about it beforehand, if possible

If there's a general purpose handheld mic, be ready to include it in the recording



# Video and song playback

Just use your ambience mics

Edit it afterwards

# The good sort of background noise

**Setting up 2 condenser microphones directed towards the congregation can be used to add ambience into a recording - response to jokes, questions, etc. Pan them hard L/R.**

**Only route these to the recording (and perhaps to IEMs if the band have them).**

**Keep the level low.**

**Background music. If you choose to record this, the spoken word is the most important thing!**

Thin the music out by making space for the voice.

Cut 350Hz & 3.5KHz, and/or....

Reduce the volume of the music on the recording.

Using a post-fade aux can help avoid sudden jumps in level

# Post processing

Top and tail

Learn to use fades - they're far more pleasing to the listener than sudden jumps

You can do overall compression in post processing

Free options - Garageband, Audacity

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