

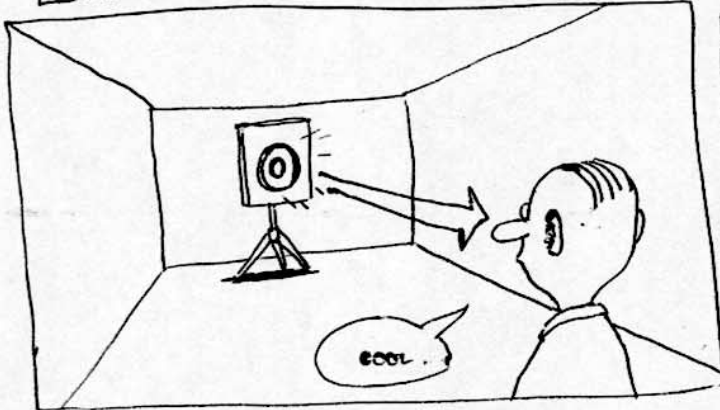
REVERBERATION

FOUR MAIN TYPES: A MNEMONIC TO REMEMBER THEM:

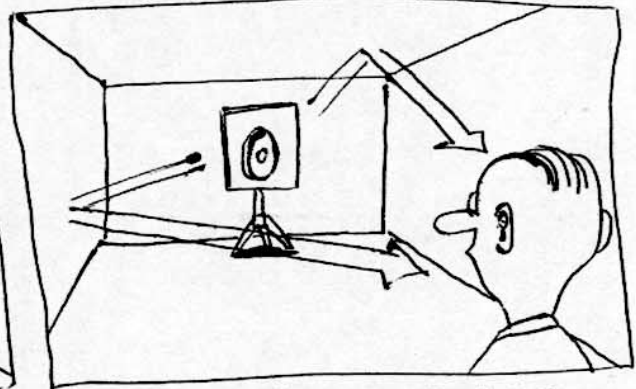
DAPS

DIGITAL REVERB
ACOUSTIC (IE ECHO CHAMBER)
PLATE
SPRING

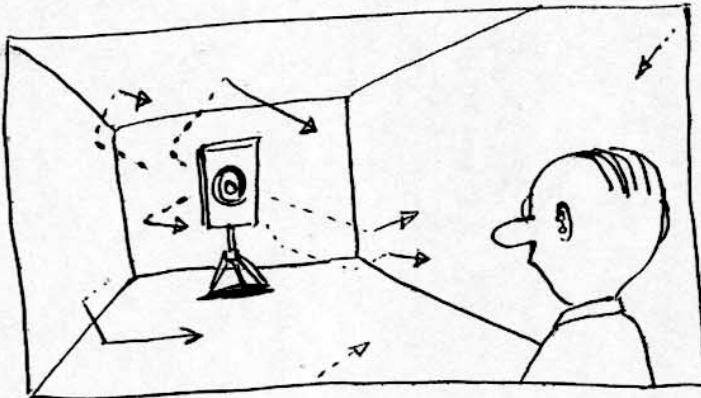
SIDNEY'S SPEAKER ROOM



FIRST OF ALL, THERE WILL BE DIRECT SOUND



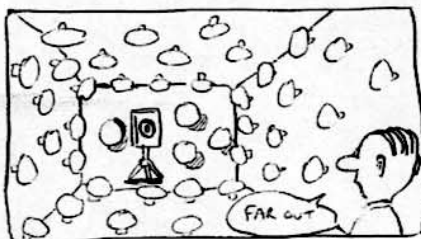
THEN AFTER A CERTAIN TIME, CALLED THE PRE-DELAY, THE FIRST EARLY REFLECTIONS WILL BE HEARD, BOUNCING OFF WALLS + STUFF



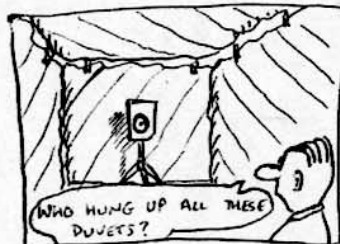
THEN WILL COME THE REST OF THE REVERB. THE TIME IT TAKES FOR THE REVERB TO REDUCE BY -60 DB IS CALLED RT60. IT IS CALCULATED LIKE THIS:

$$RT60 = \frac{V}{A} \times 0.049$$

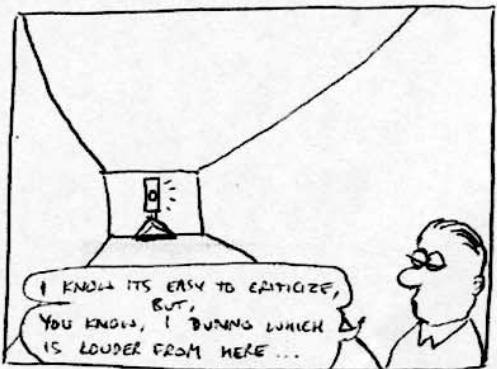
V VOLUME OF ROOM SPACE
 A ABSORPTION CO-EFFICIENT OF ROOM SURFACE



DIFFUSION - CREATES A SMOOTHER SPREAD OF REVERB



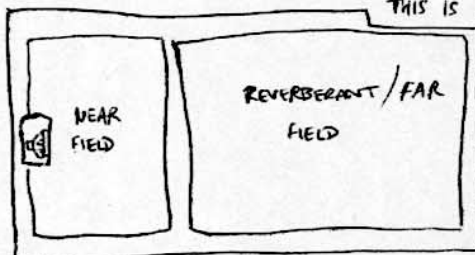
WHILST H.F. DAMPING SETS A SHORTER RT. FOR HIGH FREQUENCIES - TO EMULATE H.F. ABSORPTION



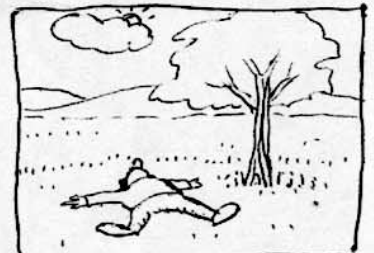
CRITICAL DISTANCE IS WHERE THE DIRECT SOUND AND REVERBERANT SOUND ARE OF EQUAL AMPLITUDE. IT WILL BE WITHIN THE REVERBERANT FIELD. THIS IS SOMETIMES CALLED THE FAR FIELD



WHEREAS THE NEARFIELD IS WHERE DIRECT SOUND DOMINATES...



SO WE HAVE NEAR-FIELD, AND REVERBERANT FIELD, OR FAR FIELD - BUT WAIT; WHERE IS SIDNEY!?!



AH - HE'S IN A QUIET FIELD RECOVERING FROM RESIDUAL DEAFNESS.