The joints that connect your jaw to the skull are called the temporomandibular joints. When these joints become damaged a patient experiences considerable pain and headaches especially when chewing. Poor joints also make crunching sounds when the bones move against each other. Design a system to measure the amplitude and frequency spectrum of these joint sounds as a function of biting force during chewing. Include all transducers and associated hardware, signal acquisition, processing and display as well as the experimental design to obtain this data.