(4) live readings through serial channels that (5) capture the vibration data, and (6) indicate an estimated time of pin-drip on time-series data.

Map the performance of the system across at least four test conditions that vary in terms of object size/weight, drop material, and distance from sensor. These conditions should be selected to demonstrate at least one instance of each of the following: strong performance, weak performance, and non-performance. Quantify the performance in a signal detection theory framework, reporting a confusion matrix, accuracy, and positive predictive value.

thresholding:

IF 214.7 < FREQ < 368.7 and 14.2 < mean voltage < 28.2

261.8 419.8

265.5 471.7

401.3 597.6