Sensor Research

* Digital output needed from sensor as the data will have to travel a relatively long distance via a cable
* Piezoelectric, Force Sensitive Resistors and Microphones were considered
* Microphone was the chosen sensor type as this seemed like the most reliable sensor to detect if the ping pong ball has come into contact with the racket
* MEMs Digital Output microphone sensor chosen

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| Sensor Name | Price | Description |
| Adafruit PDM Microphone Breakout | £4.65 | PDM signal output  URL - <https://www.digikey.co.uk/en/products/detail/adafruit-industries-llc/3492/8130887?utm_adgroup=&utm_source=google&utm_medium=cpc&utm_campaign=PMax%20Shopping_Product_New%20Customer%20Acquisition&utm_term=&productid=8130887&utm_content=&utm_id=go_cmp-19905262708_adg-_ad-__dev-c_ext-_prd-8130887_sig-Cj0KCQiAoKeuBhCoARIsAB4WxtfxuEMGZmAB_DO04UH956Tn8xTZ2WwxQ6C5-hsFln6VnOGxDn4TITQaAqItEALw_wcB&gad_source=1&gclid=Cj0KCQiAoKeuBhCoARIsAB4WxtfxuEMGZmAB_DO04UH956Tn8xTZ2WwxQ6C5-hsFln6VnOGxDn4TITQaAqItEALw_wcB>  Datasheet - <https://cdn-learn.adafruit.com/downloads/pdf/adafruit-pdm-microphone-breakout.pdf> |
| Adafruit I2S MEMS Microphone Breakout | £6.54 | I2C signal output  URL - <https://www.digikey.co.uk/en/products/detail/adafruit-industries-llc/3421/6691114?utm_adgroup=&utm_source=google&utm_medium=cpc&utm_campaign=PMax%20Shopping_Product_New%20Customer%20Acquisition&utm_term=&productid=6691114&utm_content=&utm_id=go_cmp-19905262708_adg-_ad-__dev-c_ext-_prd-6691114_sig-Cj0KCQiAoKeuBhCoARIsAB4Wxtf2mEU4iGwagNfcdvujXylhPX__T2ByxjzYIzGim1B0RZj9GGDWN0QaApiPEALw_wcB&gad_source=1&gclid=Cj0KCQiAoKeuBhCoARIsAB4Wxtf2mEU4iGwagNfcdvujXylhPX__T2ByxjzYIzGim1B0RZj9GGDWN0QaApiPEALw_wcB>  Datasheet - <https://cdn-learn.adafruit.com/downloads/pdf/adafruit-i2s-mems-microphone-breakout.pdf> |