

Ubiquitous Drums

wearable
percussion

a personal drum kit wherever you go.

Force-sensing Resistors

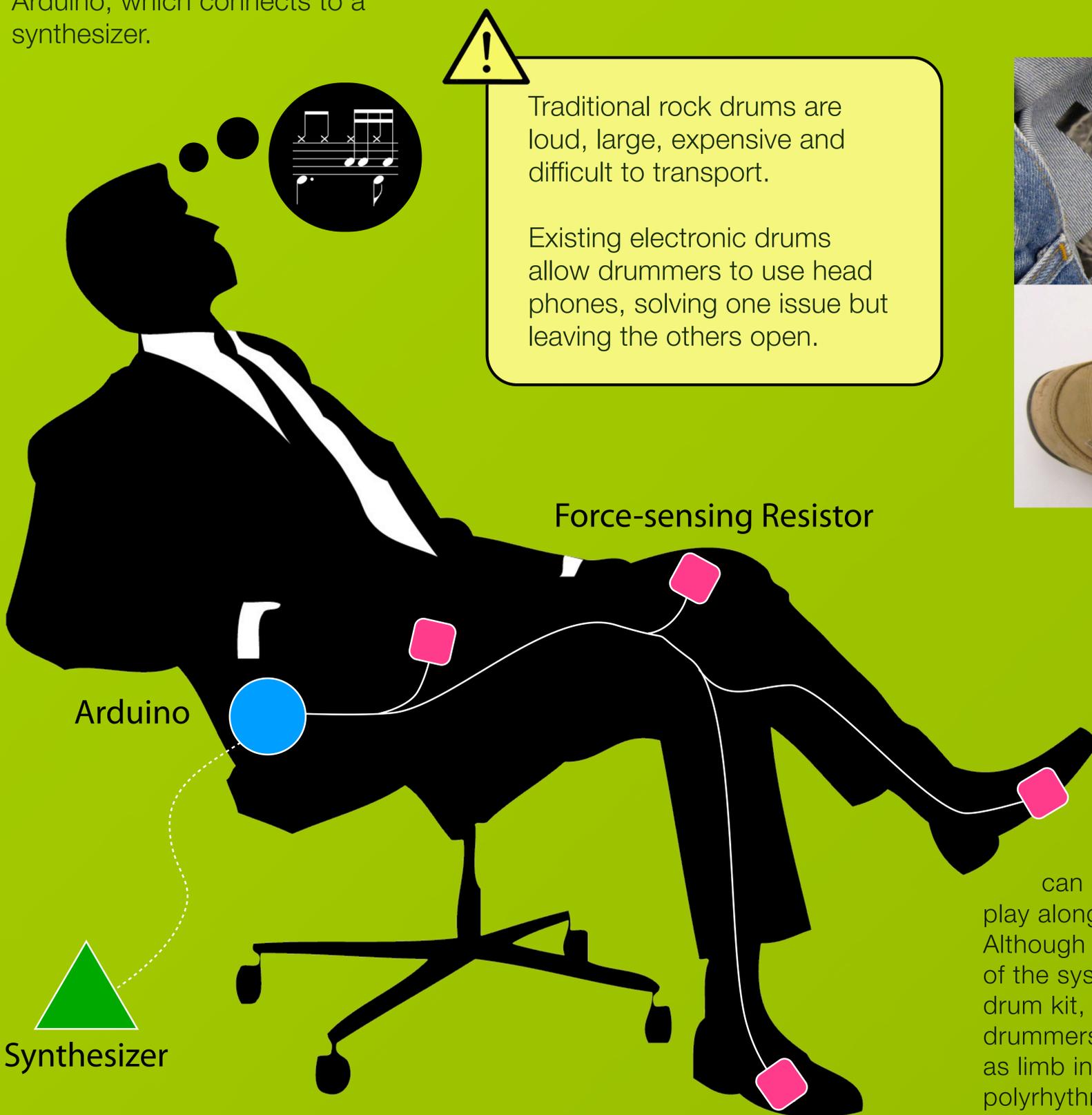
Arduino

Synthesizer

Ubiquitous Drums consists of adhesive force-sensing resistors built into a pair of pants (hand drums) and shoes (kick drums). These drum pads connect to an Arduino, which connects to a synthesizer.

When a pad is hit, a program measures the force applied to the pad and transmits it to the computer over a serial line.

A program on the computer then plays drum samples corresponding to the pad that was hit, at a volume determined by the impact force.



Traditional rock drums are loud, large, expensive and difficult to transport.

Existing electronic drums allow drummers to use headphones, solving one issue but leaving the others open.



Pads can also be placed on a table, overlaid over a practice drum kit, or attached to a pair of bongos or other hand drums. Aspiring drummers can use **Ubiquitous Drums** to play along to their favorite music. Although the drumming mechanics of the system differ from a real rock drum kit, it can still be used to teach drummers important concepts such as limb independence and polyrhythmic patterns.