

PA playground workshop
2010 diwo cultura 文化培養皿

MOTION & SOUND

Discovering the relationship between Motion and Sound is the fun part of the lesson. We acquire some of the most basic electronics knowledge and create art works during the workshop. The following three projects are the more profound ones that are covered during these five days.

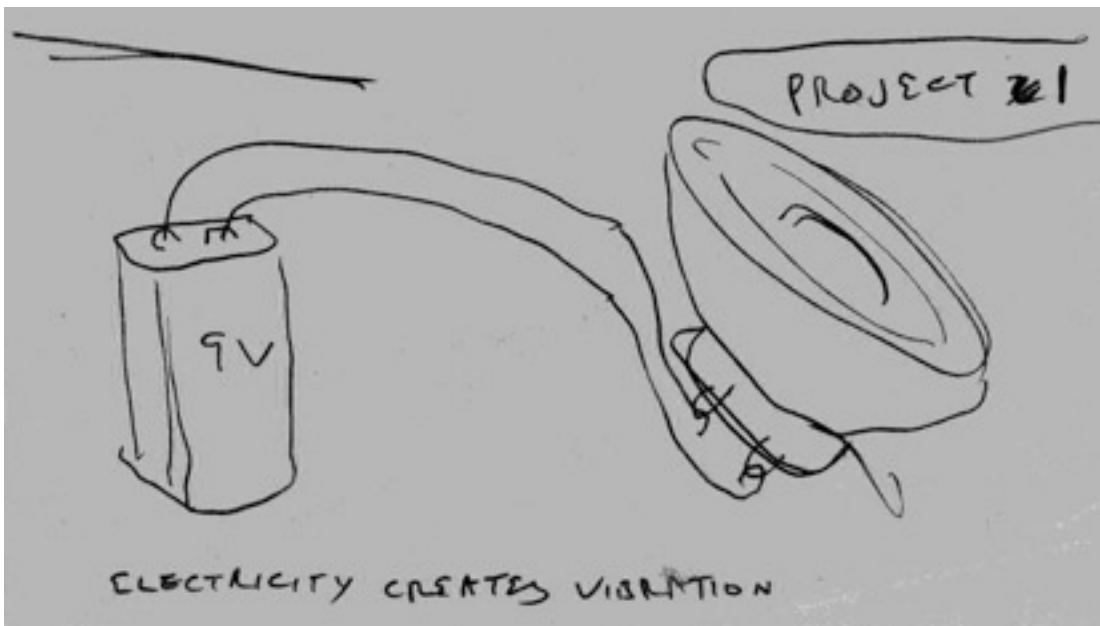
探討“動”與“聲”是這一組課程中最有趣的地方。我們學到了許多基礎的電子相關知識，並且應用在自己的創作上。以下這三個經典的實例是我們在工作坊這五天中所學到的。

// Project 1 - Electricity / Motion / Sound

>> Prepare a battery and a speaker membrane. Connect battery / speaker with two individual wires. By connecting / disconnecting, one is able to hear the sound / feel the movement that's been produced.

// 實例一：電 / 動 / 聲

>> 首先準備一個電池和一個揚聲器。分別用兩條電線把電池和揚聲器連接起來。當我們做連接 / 不連接這個動作時，我們可以感覺到揚聲器所產生的聲音和動能。

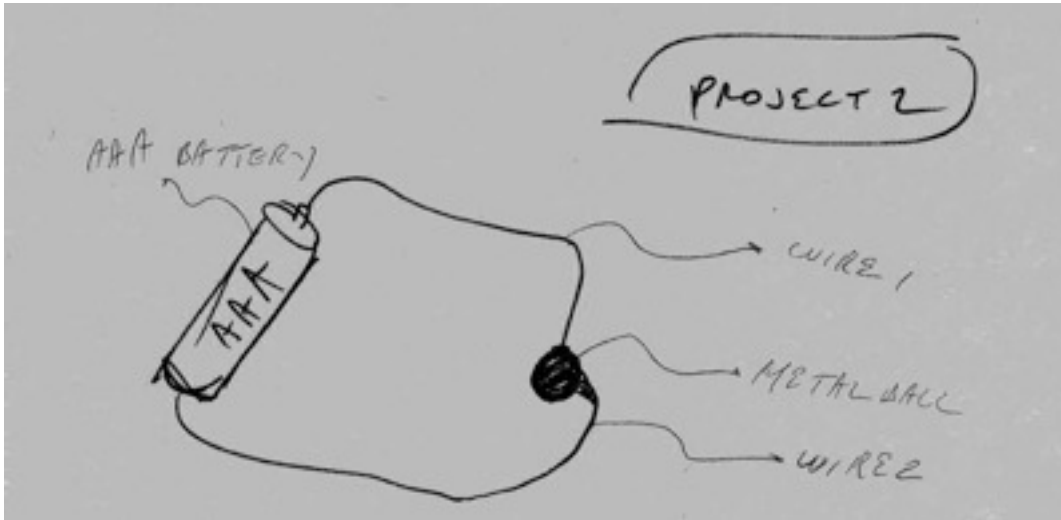


// Project 2 – Electricity & Motion

>> This project only needs a triple A battery, 2 wires and a metal ball (dia. 1 cm). Solder one wire on the metal ball. Connect both wires to “+” and “-” accordingly. Metal ball spins when connected to the battery.

// 實例二：電 / 動

>> 這個例子只需用到一個三號電池，兩條電線，和一顆金屬球（直徑約1公分）。將其中一條電線和金屬球焊在一起，接著把兩條電線分別接到電池的正負極，當完全連接時金屬球會不停的旋轉。



// Project 3 - Advanced Motion Set

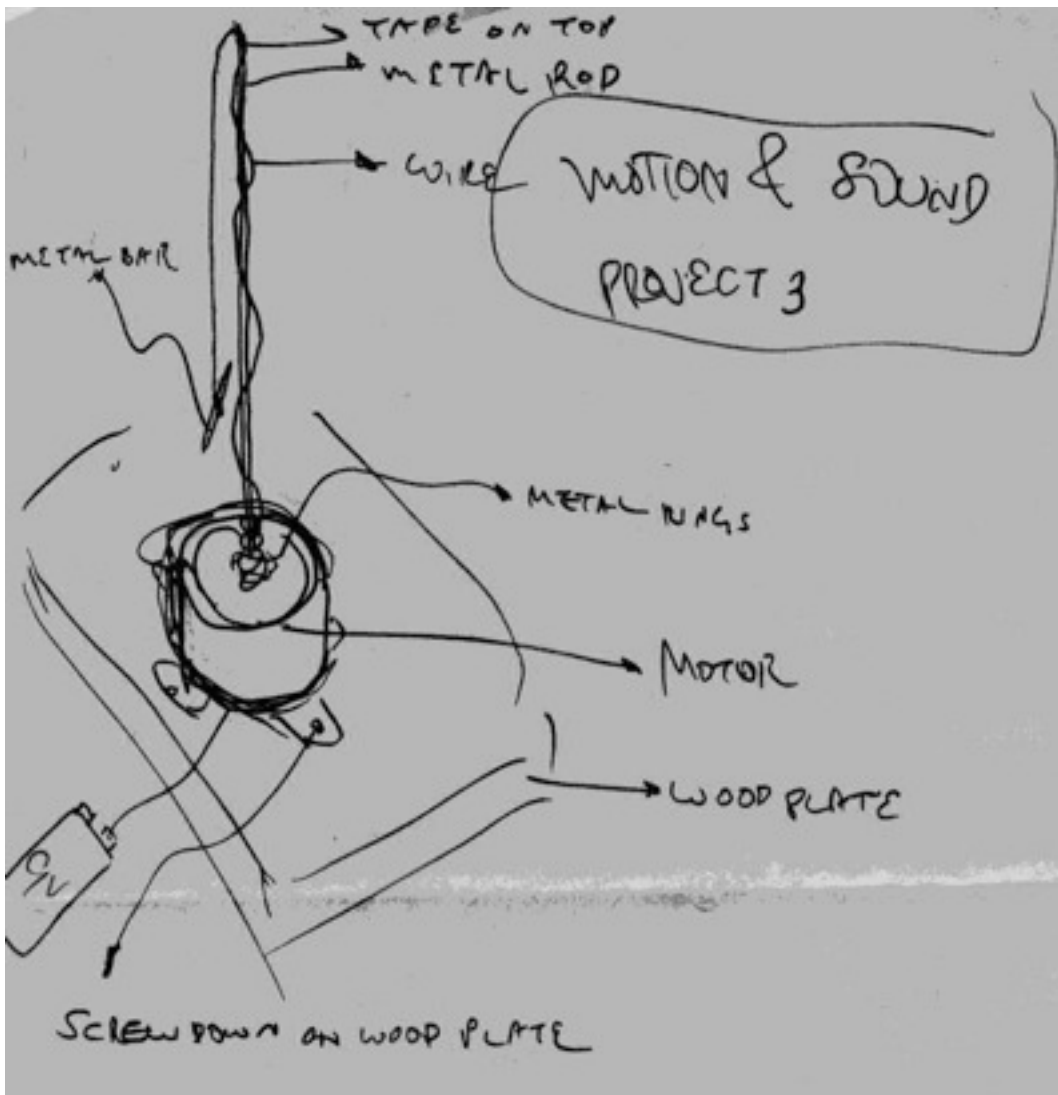
>> Tools needed: 1 motor, 1 metal rod, 4 metal rings, 1 wood plate, 2 screws, 1 metal bar (approximately 3 cm), soldering set, 1 battery (9V recommended), 1 wire (has to be twice the length of the metal rod), duct tape

>> Center and screw down the motor on the wood plate. Solder 4 metal rings to make a nice stable joint for the metal rod and motor. Place and solder the bottom end of the metal rod on the top tip of the motor with the ring joint in the middle. Solder one end of the wire on the ring joint, then swirl it to the top of the rod. Tape the wire on top. Have the rest of the wire hang down and place it to two thirds of the rod before soldering it to the metal bar. Connect one wire between the motor and battery. When the metal bar touches the rod, the mechanical set spins outwards (clockwise / counterclockwise).

// 實例三：進階動能裝置

>> 需要的材料：1馬達，1金屬棒，4金屬環，1木片，2螺絲釘，1金屬條（長約3公分），1組焊槍組，1個電池（建議使用9V），1條電線（必需是鐵棒的兩倍長），1絕緣膠帶。

>> 置中並將馬達鎖在木版上。把四個金屬環焊接在一起是為了能將金屬棒和馬達穩固的接在一起。連接時用中間的金屬環把金屬棒的底部和馬達的頂部固定在一起。接下來把電線的一頭焊到金屬環上，順著金屬棒把電線繞上去，將電線用膠帶固定在金屬棒頂端，剩下的電線會垂掉在大約金屬棒三分之二的地方，這時把金屬條焊在垂掉的電線上。最後把電池接到馬達，當金屬條碰觸到金屬棒時，這個裝置會向外旋轉（順時針 / 逆時針方向）。



By applying the knowledge to creating motion and sound, participants are allowed to take it to a deeper level and develop their own artwork. Combining with magnets and other metal parts are among a few intuitive ways of pursuing a better solution.

將所學到的知識應用在動 / 聲的作品上，學員可以更進一步完成自己的創作。在創作的過程中，我們看到許多學員的概念是跟磁鐵和其他金屬零件做結合，做出有趣的作品。

WEBSITE
[HTTP://2010.PLAYAROUND.CC](http://2010.playaround.cc)