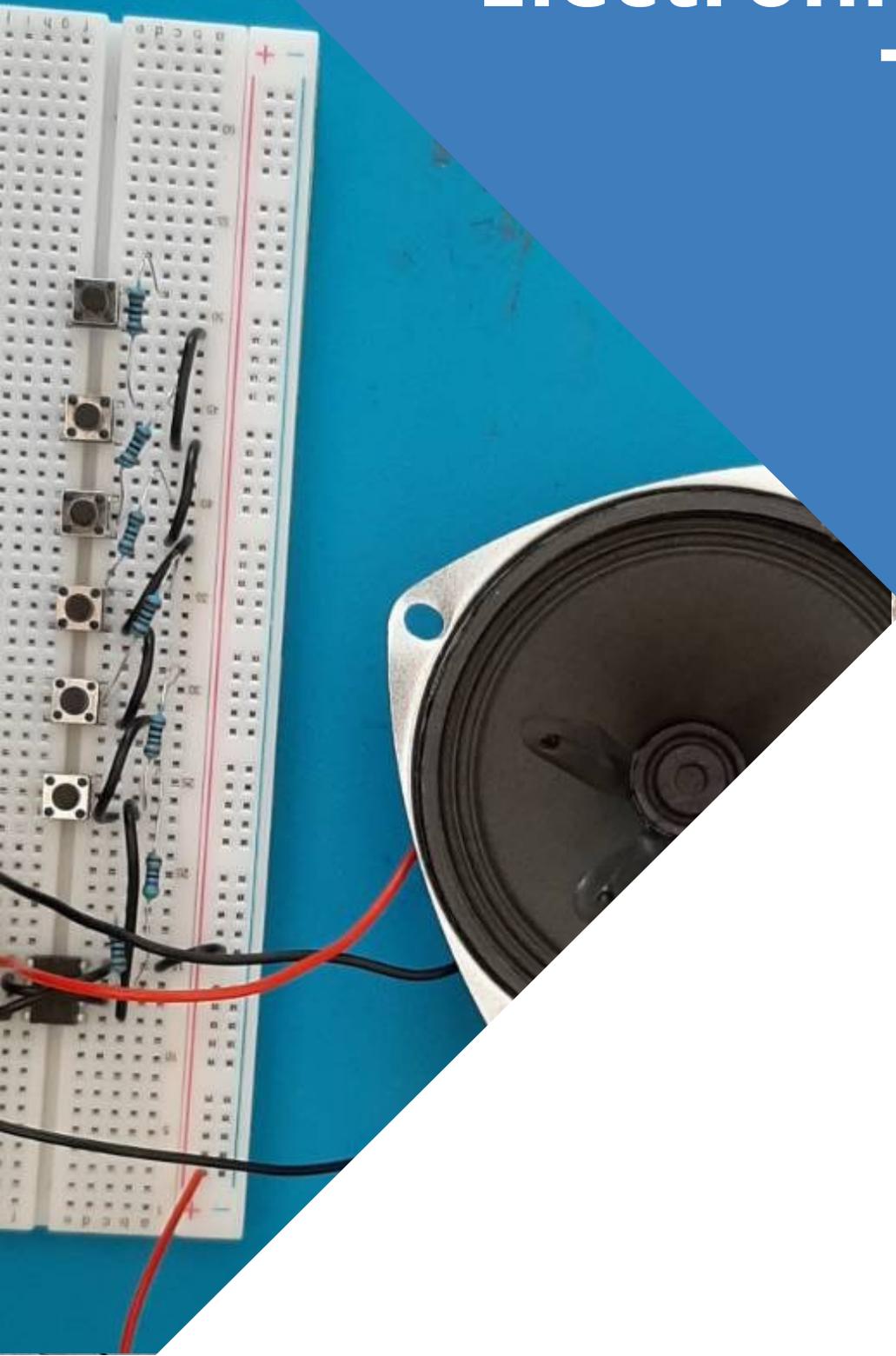


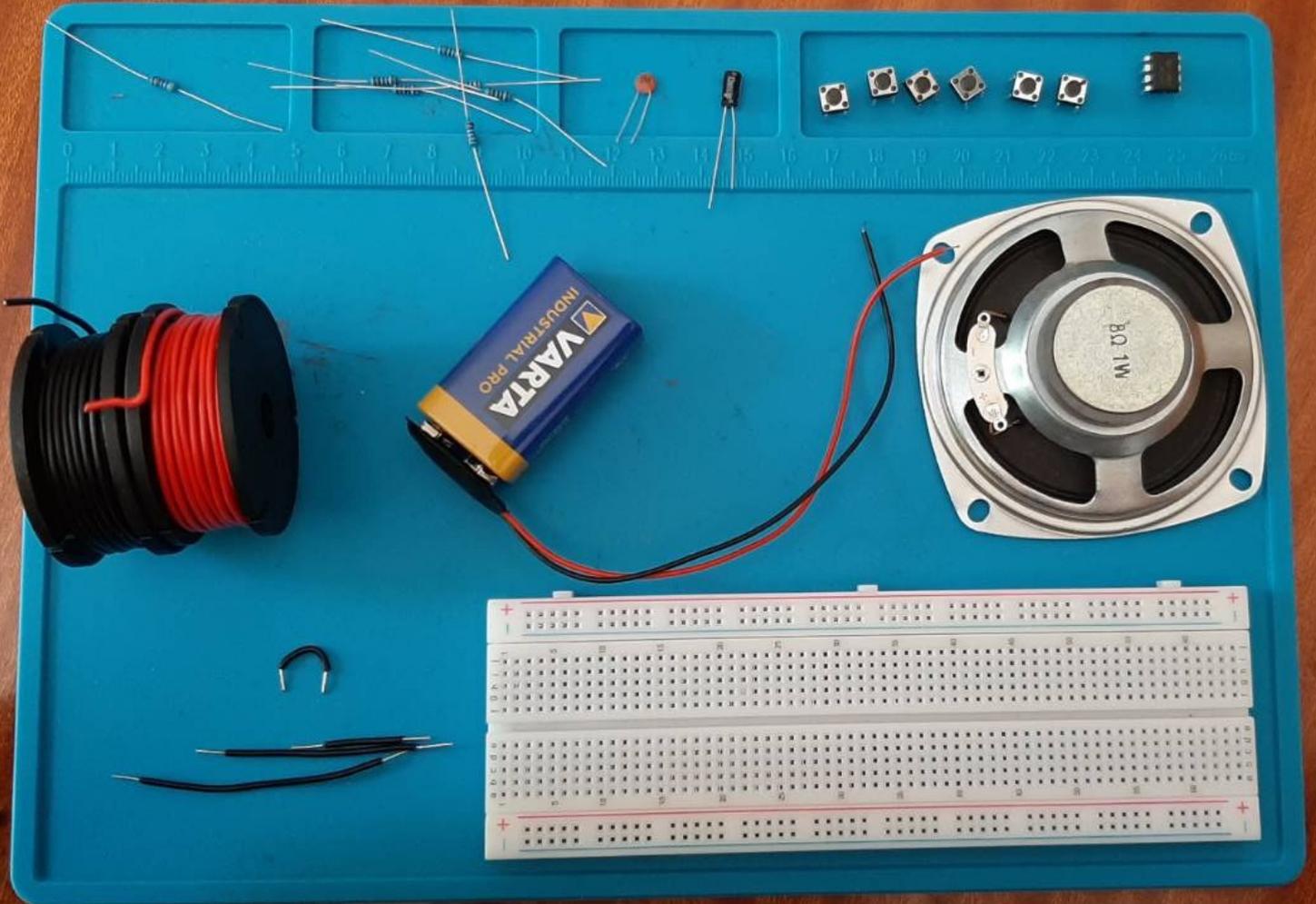


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# Electronic Piano Tutorial



# 01 LIST OF COMPONENTS



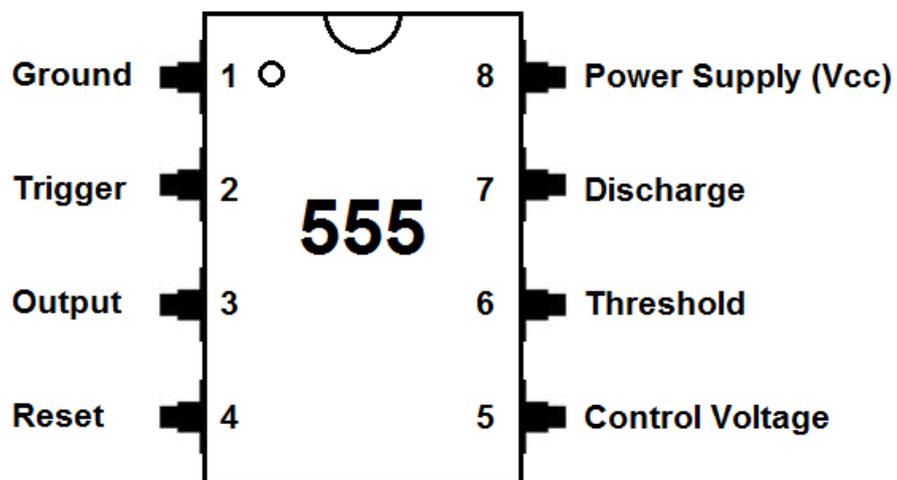
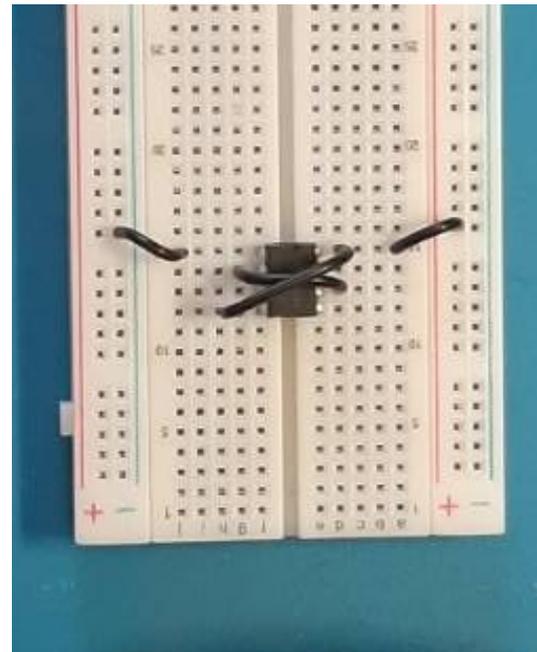
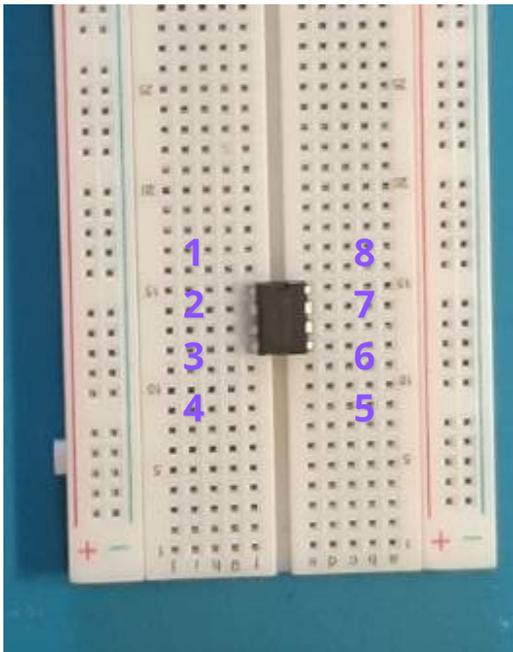
## YOUR TASK

Assemble all the component to make an electronic piano that will play different frequencies on the speaker when different buttons are pressed.

- Battery 9V and its connectors
- Breadboard
- Push button x6
- Capacitor 100nm (n°104)
- Capacitor 10uF 50v
- Resistors 1k x6
- Resistor 4.7k
- Timer 555IC
- Speaker 8ohm
- Electric cable
- Cutting wrench for wires
- Soldering Iron may be needed

# 02 ASSEMBLY

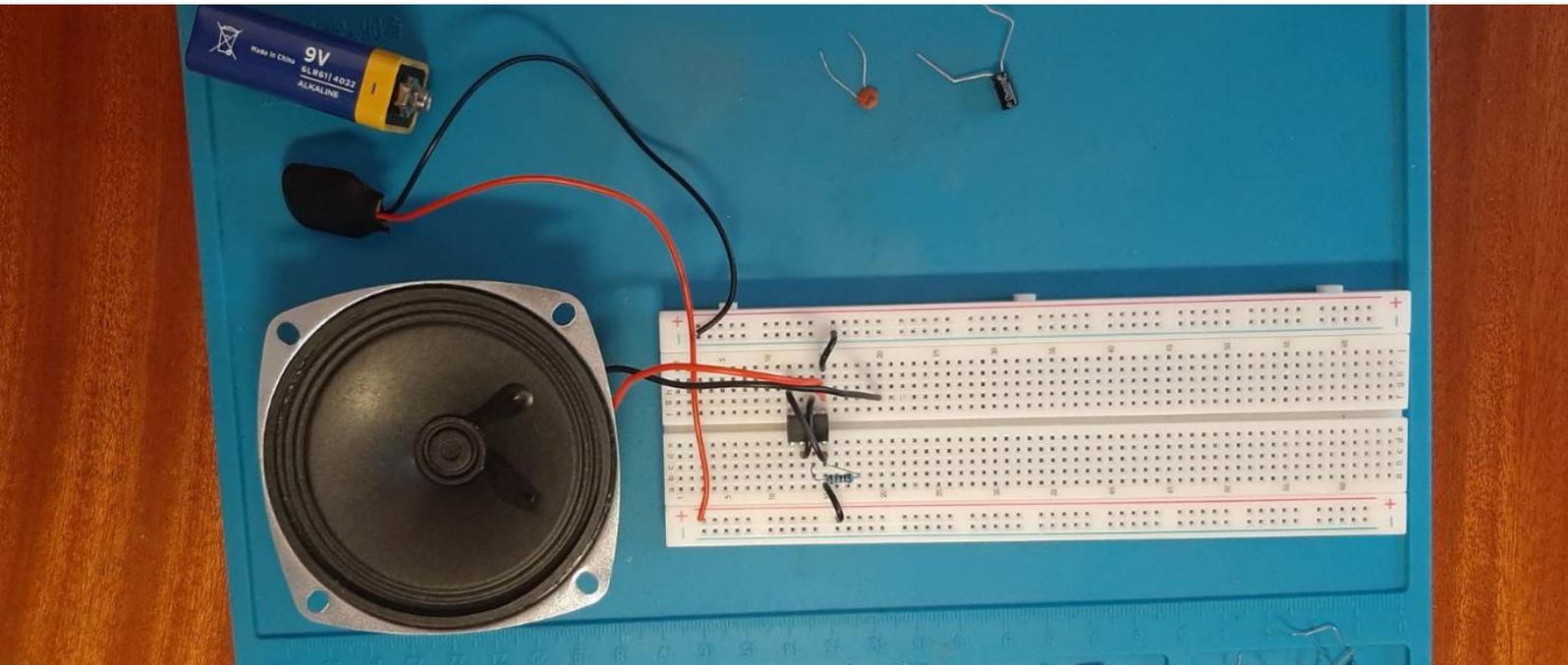
Place the timer 555 over the middle of your breadboard and start to cut some cables to connect the feet like this. Leg 2 to 3 and 4 to eight. Then connect leg 1 to the negative rail of the breadboard and leg 8 to the positive rail.



We will talk with the leg's number in the next chapters.

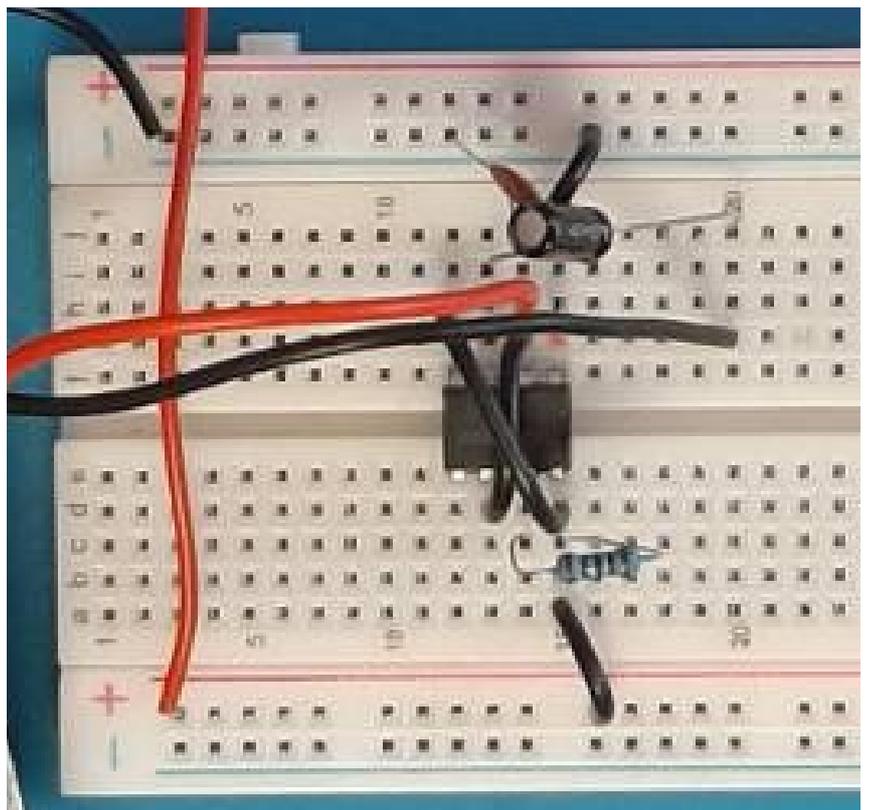
# 03 ASSEMBLY

Connect your battery and the speaker. Leave the battery unplugged for now. Place the positive cable of the speaker in leg 1 and the other further in a free space.

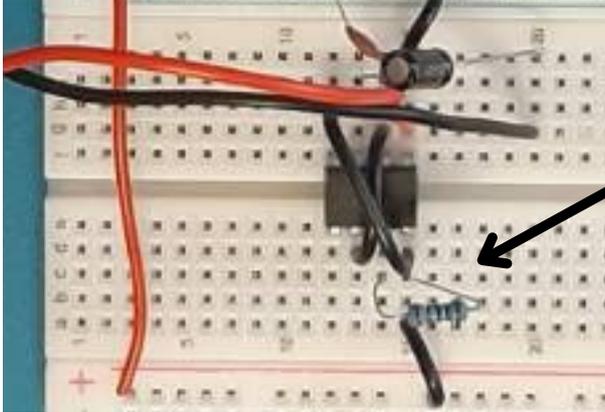


Place the **104nF capacitor**, one leg in **ground** and one connected to **leg 2** of the timer.

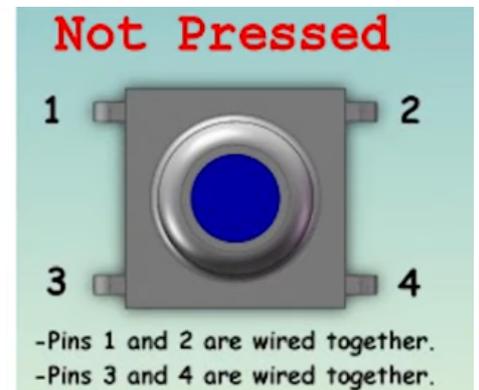
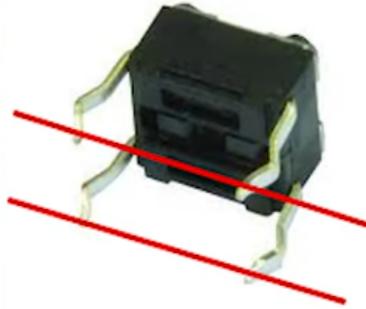
Place the **10uF capacitor**, one leg connected with ground of the speaker and one connected to pin 3 of the timer.



# 04 ASSEMBLY



Place a 1k resistance between leg 7 and 8 of the 555 timer.

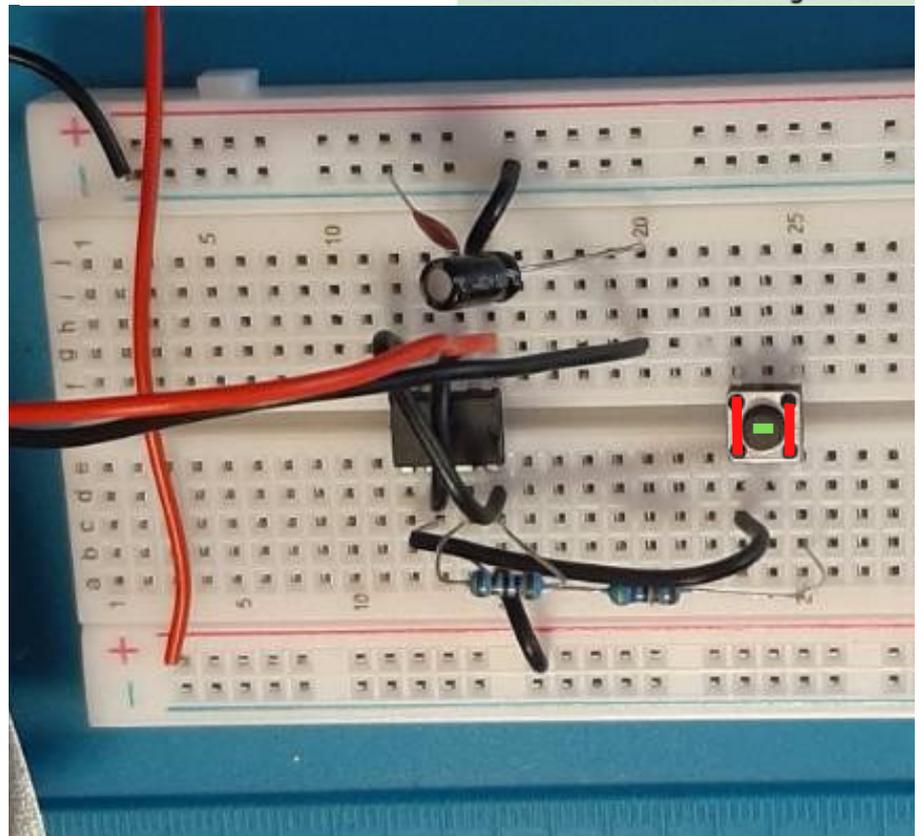


Time for the first button.

Place the button over the middle of the breadboard. The button legs should allow the current to pass when pressed.

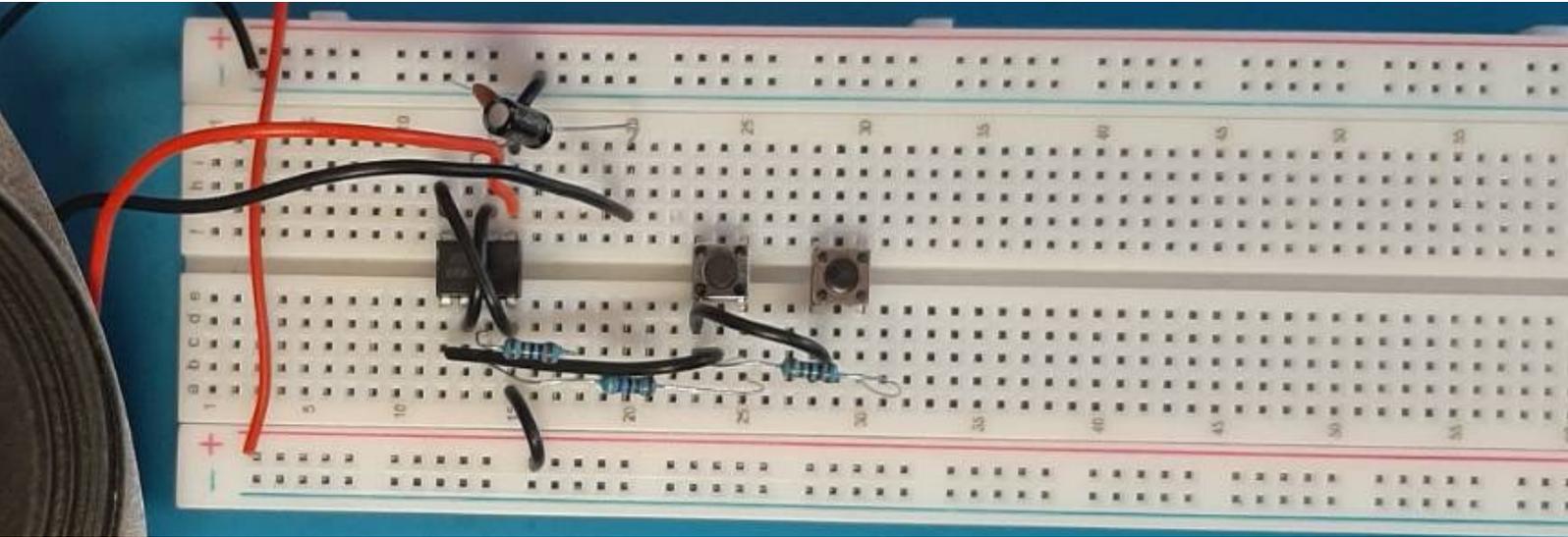
Cut a piece of cable and connect one leg of the button to pin 6 of the timer.

Place the 4.7k resistance between the other button's leg and pin 7 of the timer.

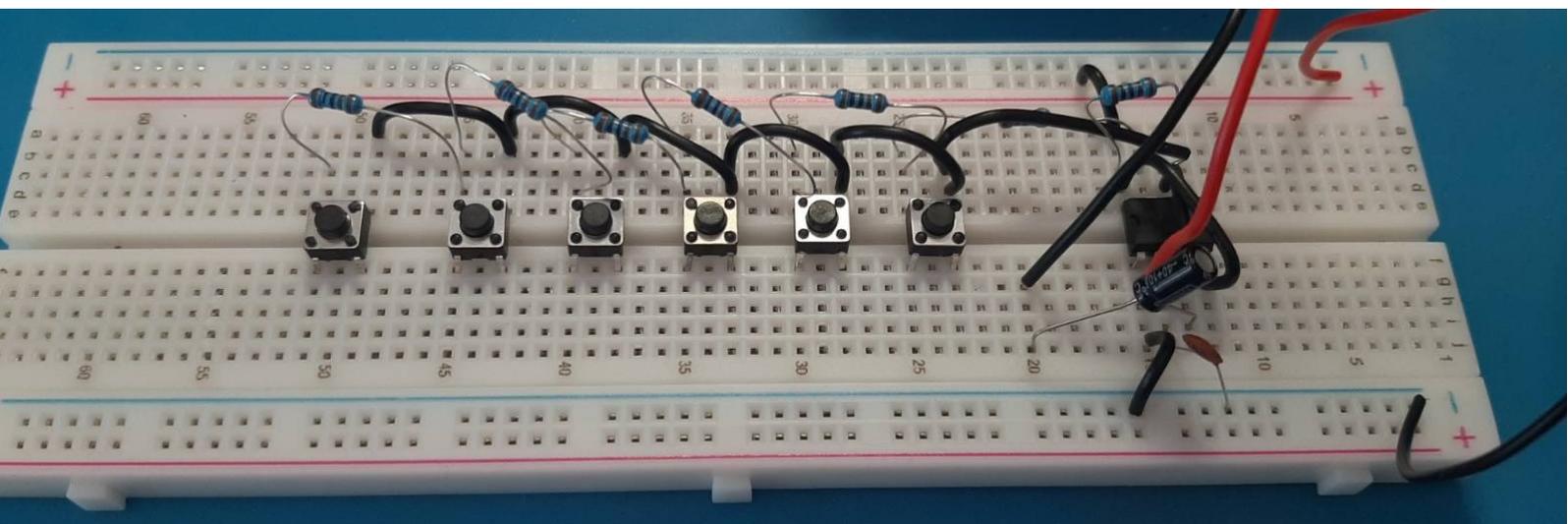


*You can connect the battery and see if the sound is working from now on*

# 05 ASSEMBLY

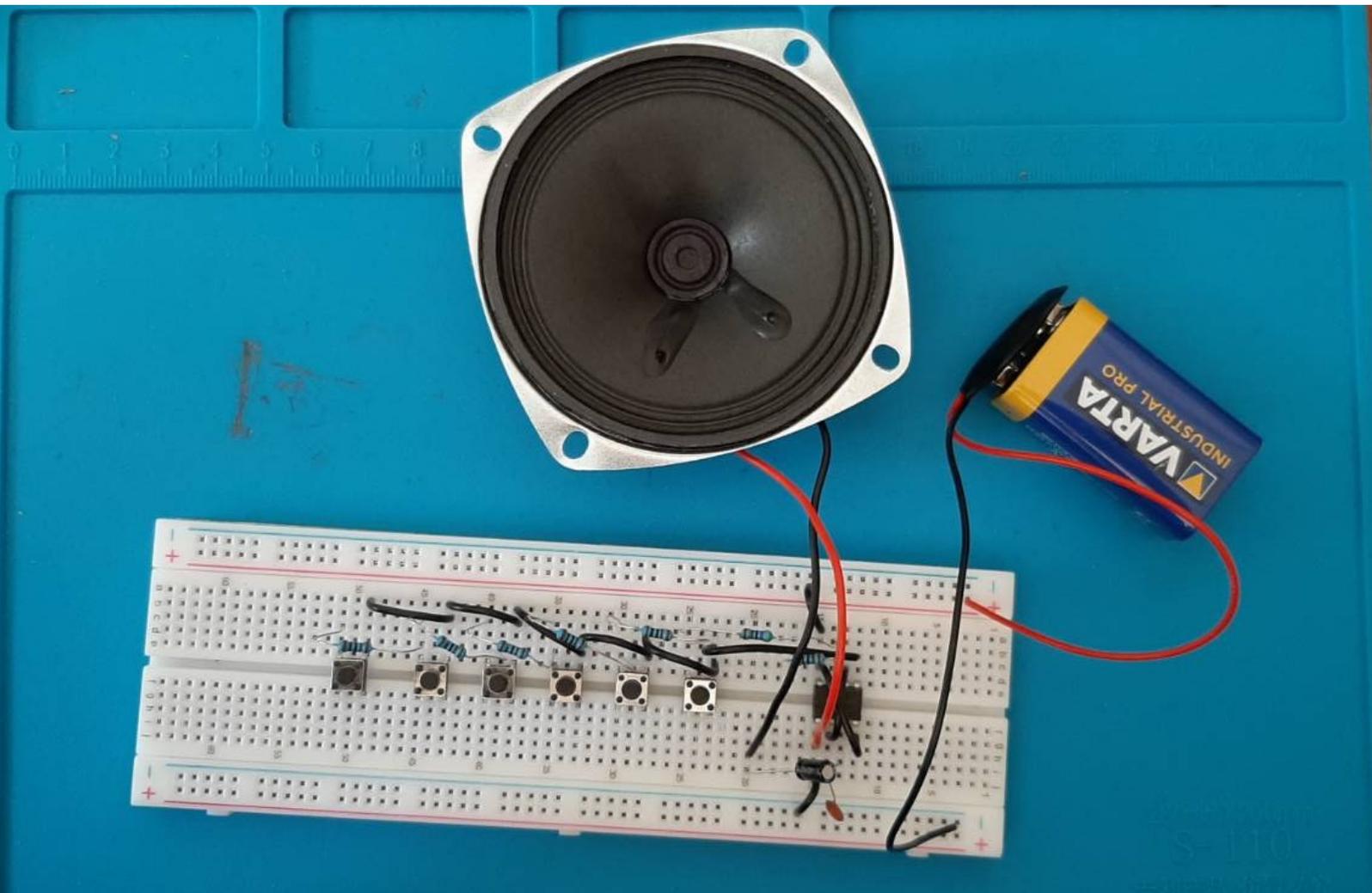


Place the second button the same way as the first one. Cut a piece of cable and connect the two first legs together. Place a 1k resistance between the two others legs.



Do the exact same process to place the last six buttons with cables and 1k resistor and your electronic piano is ready !

# 06 FINAL VIEW



You're ready to be musician!



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