

## NOTE 2007.5

OK! Lets write a simple little program to make some sounds. The logical pin most logical to connect the piezo speaker is Pin 2 as that is where the Picaxe Tune command sends its output. Remember to connect the Piezo 1- pin to ground. If you are not using the Tune command, then the piezo can be connected to any output pin. Later in the programming session, you might decide to use the Tune command, and if the piezo or speaker is attached to another pin, you will have to do a lot of re-wiring and editing to make the necessary changes. It is best to start out on the right pin and avoid the hassles...unless you also intend to use the PWM command which also outputs ONLY on Pin 2. Then you have a dilemma!

```
A:  Sound 4,(125,2)      'Tone=125 Duration=2
      Sound 4,(0,2)      'Tone=0 (silence) Duration=2
      Sound 4,(125,2)    'Tone=125 Duration=2
      Sound 4,(0,2)      'Tone=0 (silence) Duration=2
      Sound 4,(125,2)    'Tone=125 Duration=2
      Pause 2000         'pause 2000msec or 2 sec.
      Goto A
```

Downloading/running this program will result in a cricket chirp every 2 seconds.

Editing the above program to look like the program below yields the same results but has an added benefit: if you want to move the piezo to a different Pin, simply change the 4 in the Symbol line to the new Pin number and you are good to go, after you make the wiring change of course!

Symbol PZO = 4

```
A:  Sound PZO,(125,2)  'Tone=125 Duration=2
      Sound PZO,(0,2)   'Tone=0 (silence) Duration=2
      Sound PZO,(125,2) 'Tone=125 Duration=2
      Sound PZO,(0,2)   'Tone=0 (silence) Duration=2
      Sound PZO,(125,2) 'Tone=125 Duration=2
      Pause 2000        'pause 2000msec or 2 sec.
      Goto A
```

Now I had you do a lot of redundant typing in order to show you that there are always more than one way to write a program. Another, much shorter, way to accomplish the same task is this program:

Symbol PZO = 4

Symbol T1 = 125

Symbol T2= 0

Symbol Len = 2

```
A:  Sound PZO,(T1,Len,T2,Len,T1,Len,T2,Len,T1,Len)
      Pause 2000
      Goto A
```

Try Downloading this program. Now you can change any of the Symbol lines for T1, T2 and Len to easily *play* with the chirp until it sounds *just right!* This program is probably the shortest and most easily modified for finessing.