

## “Arduino” a new breath for Amateur Radio

By Kevin Mc Donald ZS6KMD

Open an electronics magazine or join a forum on Facebook and you will see that the Arduino has found it's way into our crazy fraternity with a vengeance. Multitudes of simple projects are to be found from beacon keyers to rotator controllers and everything in between.

So what does that mean for you the avid Radio Ham with a busy schedule and not enough time to practice your hobby? Well I believe it is an inexpensive way to take many new ideas and make them a reality at an affordable price. Remember that the Arduino can be re-programmed many times and does not have to be solely dedicated to one project. Now that is a major bonus.



From the Arduino Uno to the Arduino Pro Mini the uses for these little wonder machines is limitless. Arduino is an open source computing platform based on a simple microcontroller allowing for development of interfaces and software control. What that means is that you can develop your own add on boards, connect them to your Arduino and control everything from the lights in your shack to the garden sprinkler system (Perfect, now I don't have to water the garden I can play radio more often HI). With many resources available today through the internet, using Arduino is just a simple step to taking control literally of the devices in your shack.

So what kinds of projects are there that I can build while I learn this Arduino thing?

Without getting into the complex robotics possibilities, let us take a look at some of the easier projects that you can try. We will forget about the really silly blinking LED and so on and move on to practical applications like automating your house, building test equipment such as capacitor and inductance meters, volt meters and so on. Most of the hard work has been done by the clever people out there and you can purchase already built modules which you just plug in and then you load some code into the Arduino and you are up and running.

Is this a breath of fresh air for Amateur Radio or what? It peaks the interest of the younger ones wanting to learn new technologies and allows them entry into our world of radio.

Here are a few images of my projects, a rotator controller, an Iambic Morse Keyer and a DDS VFO.



Rotator Controller using Arduino Mini Pro



Iambic Keyer 5-60WPM using Arduino Mini Pro



DDS VFO using Arduino Mini Pro and AD9851 DDS module

Over the next few editions of the magazine we will look at building some Arduino projects for the shack. Simple things to get you going. We will look at designing circuits using Fritzing so you can share your projects with others, writing simple code and uploading it to the Arduino to make your project work. Look out for the articles and share any new projects and ideas with us. Photos and stories of your projects can be sent to [projects@zs6kmd.za.net](mailto:projects@zs6kmd.za.net). I will include them with your permission in future articles.

Happy Building

73 de Kevin ZS6KMD