

# Double Glaze Matters

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Alan Cuthbertson

alan@diydoubleglaze.com.au

## My Hot Box

Well it is now up and running. You may recall I was building a "hot air collector" to go on my roof. It was described more fully in my August/September issues last year.

Basically it is a large platform (15 square metres) on the roof, covered with glass. I have two fans that suck air through it into three rooms in the house.

It's now been running for three weeks and the family love it. If the sun is out for an hour the three rooms get quite warm.

The platform is split in two with two ducts entering the roof . Each duct



has a fan and the air is then distributed within the house. I am using an Arduino microprocessor that costs around \$30 to control it. Each duct has a temperature sensor and when 30 degrees is reached, the fan is turned on.

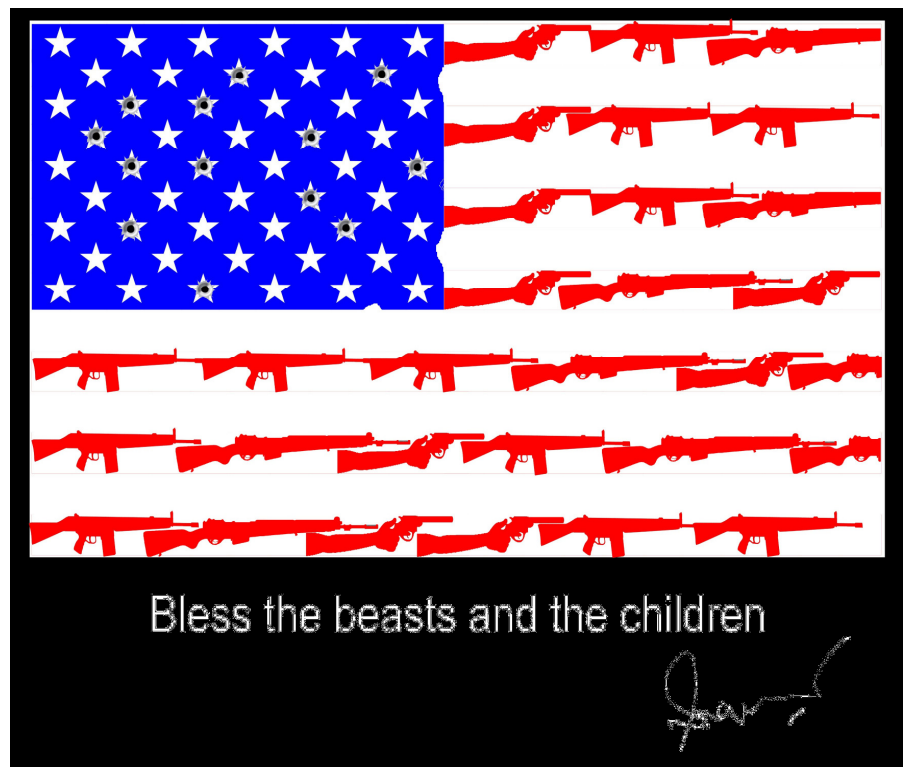
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### *Montmorency Food Swap*

*Sun 2nd June,  
10:30—11:30*

*Montmorency Primary  
School*

*Bring your home grown  
produce to swap.  
Also a talk on worm farm-  
ing*



*Franciscus Henri on the gun debate*

## My Hot Box (cont)

When it drops to 25 degrees it is turned off.

One of the fans has a 4 speed variable control on it, so I can speed up the fan on sunny days. This means that even on cloudy days, I can run the fan on the lowest speed and still get some heat out of it.

I have attached a graph of the temperature (in red) and the fan (in green). You can see as the day gets warmer the fan increases in speed. During the day it delivered nearly 3 Kwh of heat, 6 Kwh for both fans.

One thing I had lots of problems with was the wireless connection back to my PC. However it now works and so I can actually control it from my PC.

I am not sure whether it is financially viable. It would probably have been more efficient to put solar panels on the roof and use them to drive a reverse cycle air conditioner. At least then I could use it all year.

The main disadvantage is that our heater comes on at 7:00 in the morning, and by 10:00 when my heater activates, the house is already warm. I have "persuaded" the family to have the heater one degree colder on those days that are going to be sunny so

that the heat is of more direct benefit. Even if it doesn't save a lot of energy, it makes the house much more comfortable!

## Double Glazing with Bubble Wrap

I have heard of this before, but never seen it. Well, I saw some the other week and it looks surprisingly good. It had been cut neatly and squarely and then stuck to the window. It looked like frosted glass.

You can't see through it very well, but is ideal for bathrooms or bedrooms, it is really cheap and quite effective. Also great for rental places. It probably achieves over 50% of the improvement you get with double glazing.

Apparently the best way to apply it is by spraying vegetable oil on the glass and then attaching the bubble wrap with the bubbles down. Bigger bubbles (15 mm is probably better.

However it is no good if you are a compulsive bubble burster! For more info, Google "bubble wrap double glazing".

