

## Temperature Control

### **WHY?**

To make better beer, year round. See Grainfather article: The Top 10 Reasons To Control Your Fermentation Temperatures

### **HOW?**

#### **Steady** temperature

- closet or room @ ~70F for ales
- cellar @ ~50F for lagers
- beware fluctuations!

#### **Measurement**

- external contact strip (unreliable?)
- infra-red sensor/gun (emissivity)
- immersed thermometer
- thermocouple, in a thermowell
- TILT or similar device

#### **Maintenance**

- Insulation
- Christmas lights
- Reptile pad

#### **Adjustment**

- heat/cool to desired temperature to pitch yeast
- cool to remove heat generated by fermentation
- cool to cold crash or diacetyl rest

#### **Control**

- heat wrap in a cool place (raised off a concrete floor)
- wet towel or ice packs
- refrigerator with external controller
- glycol systems etc.