GerDragn
DRAGON SHAPED LED LIGHT CHASER

FEATURES
Cool patterns plus remote-control capability. Backlit glow casts red reflections on the wall or surface behind the box.

QUICK START GUIDE
1 Set on mantelpiece, hang on wall, or place face up on table top.
2 Plug wall-wart into electrical outlet.
3 Enjoy!

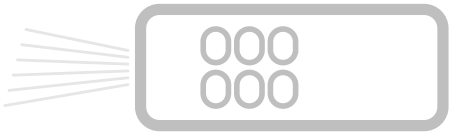
REMOTE CONTROL OPERATION
You may choose the pattern you wish to enjoy by using **any** infrared remote control. Aim the remote at the black jewel in the center of the dragon's tail.

Press any button — the yellow eye will pulse with the infrared signal and the dragon will go into "chooser" mode.

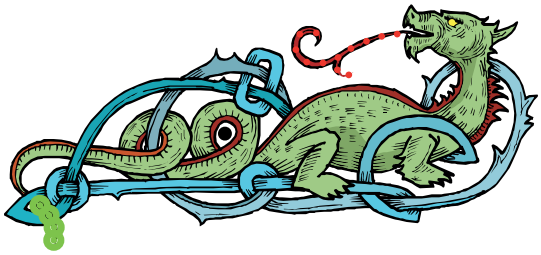
Continue pressing the button to advance the pulsing red LED on the flame to choose your "channel". Release to go!

The dragon's patterns are dynamic — the speed of the pattern, the pulsing of the eye and backlit glow will change over time, even within the same pattern.

Additionally, the dragon will switch to another random "channel" if user input is not received for ten minutes or so. Be surprised!



Choosing the "tail' puts the dragon to sleep — the LEDs display a slow heartbeat. Wake up the dragon with a remote.



HOW IT WORKS
The core of the dragon box is an SX microcontroller – a small computer that is capable of driving and reading fairly heavy current loads (like LEDs and detectors). The four small header pins sticking off the side of the circuit board comprise a programming interface.

A custom, embedded application was written on a desktop computer, using a combination of a BASIC variant and low-level assembly language. The final code was then compiled and subsequently downloaded via a serial programming device to the chip in the box. If there are bugs, blame the creater!

The LEDs do not really get brighter and dimmer — it's a trick! The LEDs are actually switched on and off about 200x per second, at a **ratio** of **on**s to **off**s that gives the appearance of brightness and dimness. This is an effect of "persistence of vision" — the same human optics characteristic that appears to give life to the still frames of a motion picture.