Dawn to Dusk

Light Controlled Housing for Zebrafish

PROBLEM: Zebrafish housed in light controlled housing can experience stress due to lights turning on too abruptly.

SOLUTION: Simulate sunrise and sunset when the lights are turned on and off inside the Zebrafish Light Controlled Housing.

The Aquaneering AquaTouch family of products is designed to make it easier for users to monitor their zebrafish systems and to greatly enhance the control aspects of the more complex aquatics systems that this species requires. The new generation of light enclosure controls includes specialized circuitry designed to gradually turn the light on to simulate sunrise, and to dim the light to simulate sunset. The sunrise/sunset simulator control can be configured by the user to increase or decrease gradually from 15 minutes to 1 hour. The controller is intuitive to use for setting all of the timer features. Not only can the settings be modified to control the rate of time for the lights to ramp up and dim down, they can also control how bright the user wants the maximum level of light to be.

Most fluorescents cannot be dimmed without expensive ballasts. The LED light strip requires minimum voltage to turn it on, so using a conventional dimmer to gradually increase the voltage will not work. The Aquatouch controller works differently through a custom printed circuit board which is integrated with LED lights and requires no ballast.

The goal of this controller is to mimic what nature already provides, with a simple and easy to use interface.

- Mimic natural sunrise and sunset
- Reduce "light shock" to animals
- Improved breeding cycles
- Increase or decrease lights gradually from 15 minutes to one hour
- Control maximum level of light
- LED light strip is economical (no expensive ballasts – only intelligent circuit board)
- Simple intuitive programming via the touchscreen



Photo shows an open compartment of a light controlled housing shelf. The new AquaTouch controller can simulate sunrise and sunset

