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http://wolfstone.halloweenhost.com/ThunderAndLightning/clsxen_XenonLightning.html

Xenon Lightning Implementation

Had enough of the dry dreary schematics and theories? Take a look at what we did our thunder and lightning simulation.

This is our purpose-built xenon flash unit. We also have a page for our incandescent lightning.



External photos



This is the complete purpose-built xenon lightning machine.

This particular implementation is a bit different from the schematic that was presented, in that the xenon flash lamp is attached to a remote flash head "pod". The flash head is connected to the main controller box by way of a standard three-prong cord. An ordinary extension cord can be used to place the flash head as far away from the controller as you wish.

You can't see the electronics for the flash head. They are inside a box glued to the back of the reflector.

I do not recommend this particular construction technique, because the resulting unit is more dangerous to use. Thus I do not provide details on how to make this particular variation on the design.



This is the rear of the control box, showing: fuse, speaker-level audio input, indicator lamp, and socket for the flash head.

Note that the socket for the flash head is painted red to make it very clear that this is not an ordinary outlet. The plug laying on top of the box is also painted red. It's the cord to the flash head.

The indicator is a neon lamp placed across the high-voltage to the flash head. As long as that lamp is lit, unplugging the flash head is dangerous!

Sure would be nice if all that stuff on the back were labeled!



The front of the controller has: test switch, sensitivity control, and power switch. The power switch also contains a pilot light.

A completed unit would have all controls labeled.

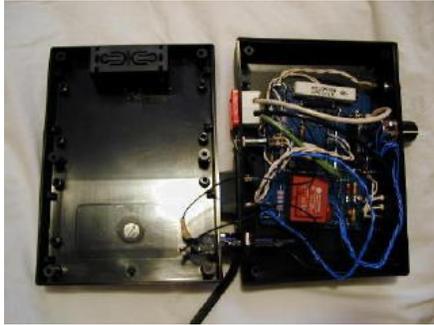


The flash head has a spring-loaded clamp that can be used to mount it high up - probably in a tree. It is shown here attached to some other limb.



This is the business end of the flash head. You can see the xenon lamp nestled in the middle of the reflector.

Internals



This is the inside of the controller.



All the guts of the controller are in the top of the case.

The circuit is assembled on blue perf-board, using flea-clips for terminals.

Note that xenon flash and strobe circuits are electrically hazardous. I have managed to vaporize the tip of a screwdriver while working on one. A plastic case is mandatory, as is extreme care during assembly and testing. Just because the unit is unplugged doesn't mean it is safe!



This is the inside of the flash head.

There is another neon indicator here, just to remind you that it is really dangerous to unplug the flash head while there is still a charge on the capacitors.

The plug going from the flash head to the controller is painted red. That's to warn you against plugging it into anything other than the special socket on the controller.