

Draining the charged Flash Capacitor

You have to assume that the flash capacitor will have voltage in it. It may not be fully charged which could be 300 volts but it may only have 10 or 15 volts in it. Draining the Flash capacitor is one of the most important steps in your build by hurrying or assuming that the slave is discharged, ruining one of the Low Power components on the Vivitars Main board or the Slavemaster board is very good possibility. So for both of our sakes please DISCHARGE THE CAPACITOR.

There are actually 2 components the Flash Capacitor and the flash tube ends that are exposed and carry the high voltage. Also there are pads/components on the slave's circuit board. These can easily shock us or cause a short to another part of the board when it is accidentally come in contact with.

I use a resistor to discharge the capacitor and I will be including with each board it is a 100ohm 10 watt wire wound resistor. This is a large resistor that won't get so hot to the touch and also will discharge the slave very quickly and safely.

I prefer discharging it at the flash capacitor or the flash tube ends and actually wait a few minutes after a drain and drain it a second time as the Capacitor somehow naturally rebounds some of its voltage after the initial discharge. Remember the slave and the slave board has low power components on them that anything higher that 5 volts could be easily ruined. SO DOUBLE CHECK THE VOLTAGE AT THE FLASH CAPACITOR.

Now that we are sure the voltage is removed and the slave cannot harm either us or the low power components we can go ahead and do the modifications to the slave boards. Don Kirk has done a great job in modifying various slave flashes and supplying us with documents on each one His modification documents can be found in my websites modification documents page.

Once finished with the modification I feel that it is a good idea to test the slave to make sure it is in working order skipping this can make troubleshooting issues much harder. First protect the board and the flash cap to prevent a short. To do this hook the batteries to the slave and then just touch the trigger wires once it has fully charged. If it flashes as it should at this point we are almost ready to go to the next step but FIRST DICHARGE THE CAPACITOR AGAIN. Please now is not the time to hurry

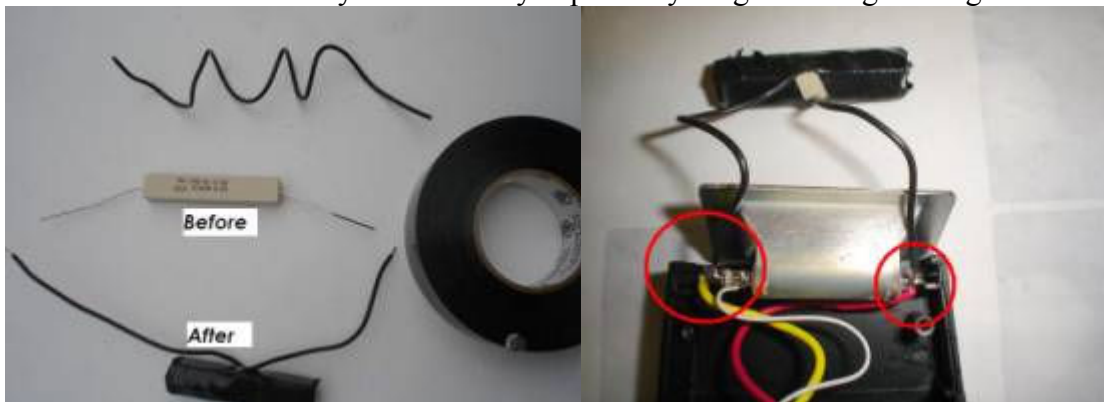
I now will cover the capacitors contacts and the flash tubes ends with Electrical tape also I place/stick a piece of PT1100 tape on the bottom of the Slaves circuit board(More than once I have set this on a screwdriver or tweezers and ruined components on the slave). Again caution on the safe side is always best

To Drain the capacitor for modification and slave build.

1. First it is a good idea to test the Flash to make sure it is in working order before you attempt the modification. Most Vivitars have a test flash button that you can press and check the flash.
2. On most 2000 and 2800 flashes the flash tube ends are usually the first exposed component and make for a safe and easy place to drain the capacitor.



3. Now to modify the 100ohm 10 watt resistor I use a piece of 22 gauge wire. Soldered it to the resistor and covered it with electrical tape. Making a tool that works very well too drain the flash capacitor using this resistor you will see the spark when draining the capacitor and sort of lets you know it has been drained. In the picture I drained it right at the flash tube ends this way I never really expose anything to the high voltage



Now you should safely be ready to take the slave apart for modification without chance of damaging the components or hurting yourself with the voltage.

Once finished with the modification of the slave I will use PT1100 on the bottom of the slave board the flash reflector and also the Capacitor to secure them in the build

