









Chocolate block connectors used for a "Power Tap" under the track, quick, simple, clean and no solder joints which may increase resistance over time.

Using a chocolate block connector As a "repair joint" for track braid. When the connector is in contact with the undersurface of the track and braids are tensioned through it prior to Tightening, this method ensures a good connection, holds braid tension on the track and Prevents "bumps" on the joint above. It is also simple to replace braid again as needed over time.

The following are a number of tips for creating dead strips and hooking them up to lap counter / race control systems. These Mainly apply to the use of the LAPMASTER race system which we use with great reliability. If you are installing Lapmaster on your track you should follow the tips below which we have found will ensure a great, reliable installation.

DEAD STRIPS - Dead Strips should be approximately 6"-7" (150 - 180mm) long. You must ensure a 1" gap between the track braid and dead strips at each end. Then infill the gap with shorts strips of plastic/Formica bonded into the slot, this stops the cars bumping as they run over the isolated areas. (see photo on previous page). This "gap" also ensures that there are no "shorts between the power braid and the dead strip if a car stopped over the 2 and bridged the gap).

The dead strip braid should obviously be isolated from the track braid and the easiest way to install is drop the braid down the holes and Staple it to the underside track surface. There is no real need to hook both of the dead strip end together, just take the lap counter connections from one end of the dead strip. It is usually easier to staple the dead strip wiring to the "clean surface" of the braid under the track, as long term, a couple of tight staples will cause less resistance in the joint than soldering the wire to the braid.

With the Lapmaster race control system it is ESSENTIAL you get the polarity of the dead strip wiring correct, otherwise the cars will not count correctly when they cross the dead strips at speed. (Check the wiring instructions in the Lapmaster instructions).

In regard to connecting the the power supplies / track power wiring to the braids, by far the best method is to use 4mm cable and when connecting to the braid use the biggest "chocolate block connectors" you can find, inserting the braid from one end of the chocolate block and the cable from the other end and tightening both screws hard. (again no solder joints). You can also use this method of connecting two braids together if repairing a section of braid where you have two braids "down the same hole" by setting the braids face to face, putting them in the chocolate block, pulling tight and then screwing up the chocolate block connector. This give a great, almost zero resistance joint which also holds the braids tight and which may also be disassembled whenever required for further repairs.

## There are a couple of KEY things to do when installing Lapmaster.

The computer should be Windows XP. It should have a minimum of crap on the hard drive, (remove all unnecessary programs and crap).

The computer needs a minimum of 1 gig of memory - preferably 2)

Ensure the Lapmaster box is connected via a dedicated Com Port - (**NOT A USB ADAPTOR** as this will make the unit unreliable AND CAUSE COMPUTER TO CRASH ON A REGULAR AND VERY INCONVENIENT MANNER!!)

Configure and wire the lap master system to turn on all lanes together, NOT INDIVIDUALLY! Use the lane one relay in the Lapmaster box to switch the power relays together on the track "control board" which should have one 40 amp "vehicle type" relay per lane - and the coils of these relays should be hooked together, powered by a separate small "plug in 12 v supply" and these are switched by the "zero volt" connections on the lane one relay in the Lapmaster box. That way, all "power" is switched by the power relays and the Lapmaster box is just switching the power relays on and off and the little con troll relay is not taking any load.

In regard to the 5 volt supply for the lapmaster box itself, we use a computer PSU unit as this provides a far smoother power supply to the unit than the "plug in power supply" supplied with the lapmaster unit. This is really essential if you are located in a "factory" or commercial venue where the mains power is split off 3 phase and can ripple.