

DIFFUSER HARDWARE & SOFTWARE COMMISSIONING GUIDE



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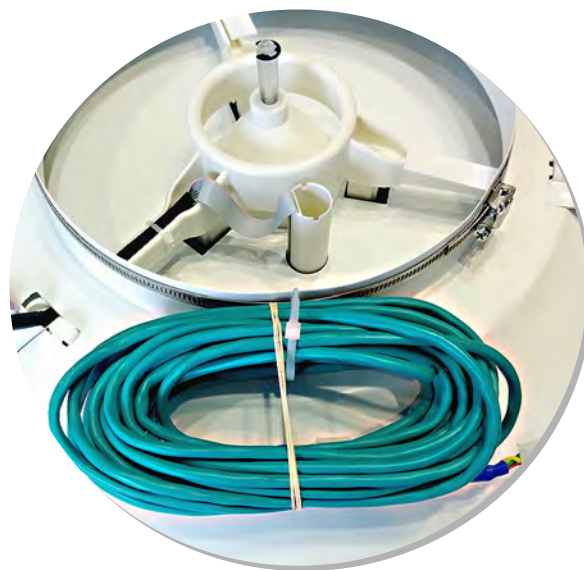
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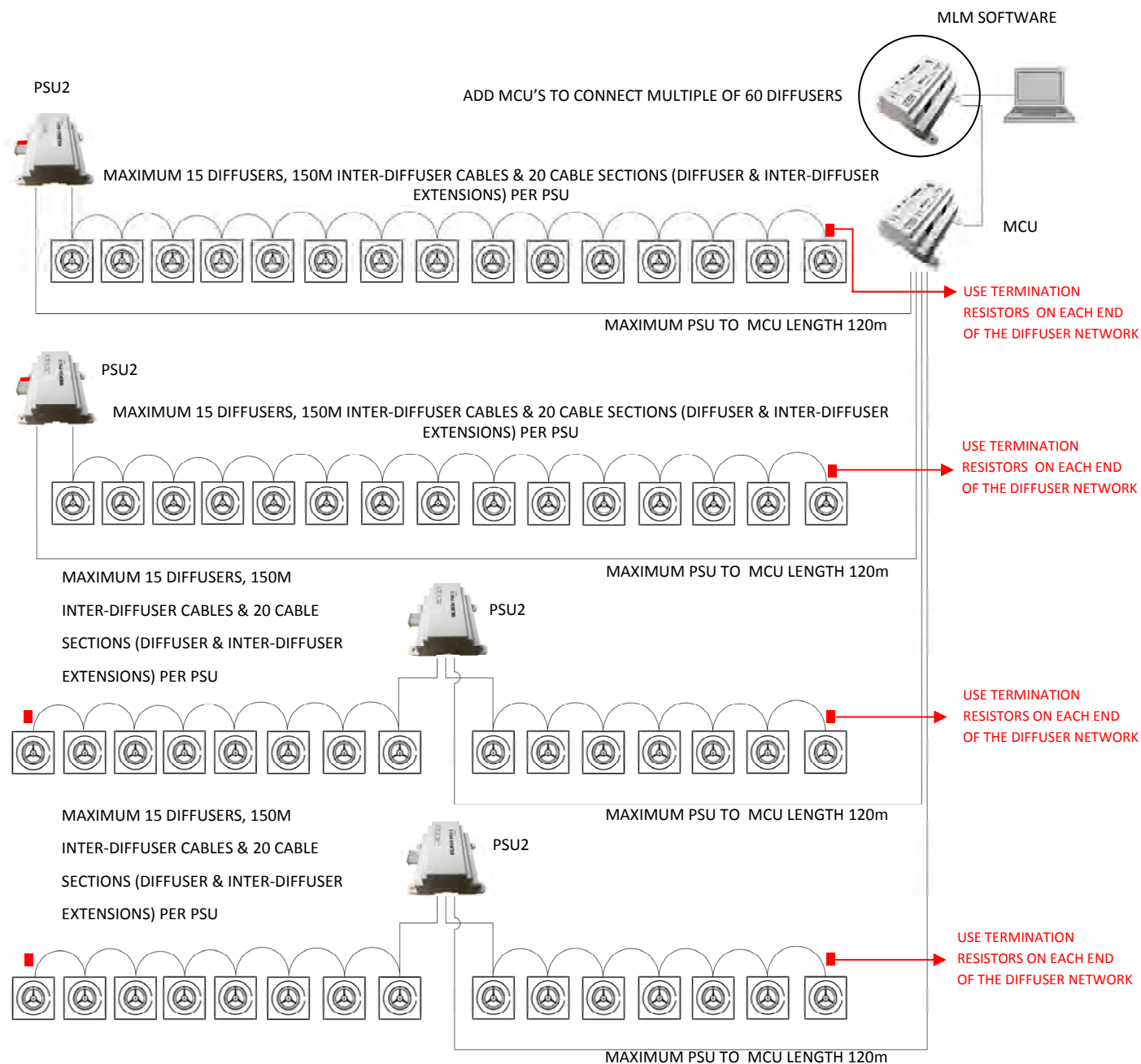
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MLM CONTROLS WIRING SCHEMATIC



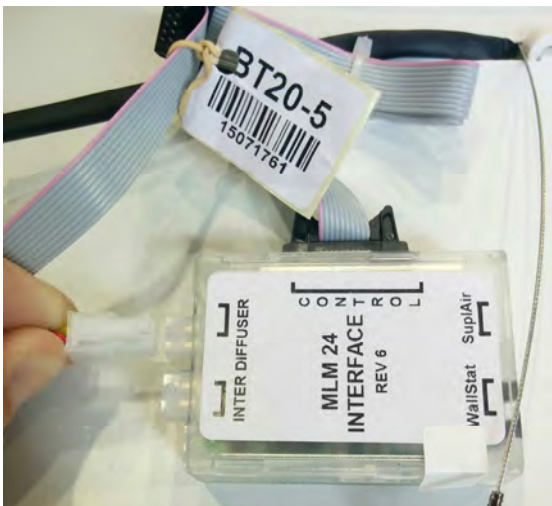
Install Diffusers in Ceiling. Note: Every diffuser comes with a Slave Cable (Shown)



Remove the serial number label shown and stick to your floor layout plan. This will allow you to locate your diffuser correctly later.



Connect the Slave Cable to the Interface Box Inter-Diffuser socket as shown.



Connect the next diffuser to the open port and continue to loop or daisy chain diffusers together until you reach the last diffuser



Note: Every Power Supply (PSU) comes with 2 termination resistors. These termination resistors need to be plugged into the last open connector on the diffuser run. There could be 2 open diffusers or one open diffuser and an open connector on a PSU. **The termination resistors ensure strong communications between diffusers.**



Last diffuser shown with termination resistor



PSU shown with both ports populated with slave cables that are going to diffusers.



PSU shown with one port populated with a slave cable going to diffusers and the other correctly terminated with a termination resistor.



Please note that if cables are modified in any way, the Rickard warranty is void. Do not join, cut or make new cables. If longer cables are required, please order cable extensions from Rickard.



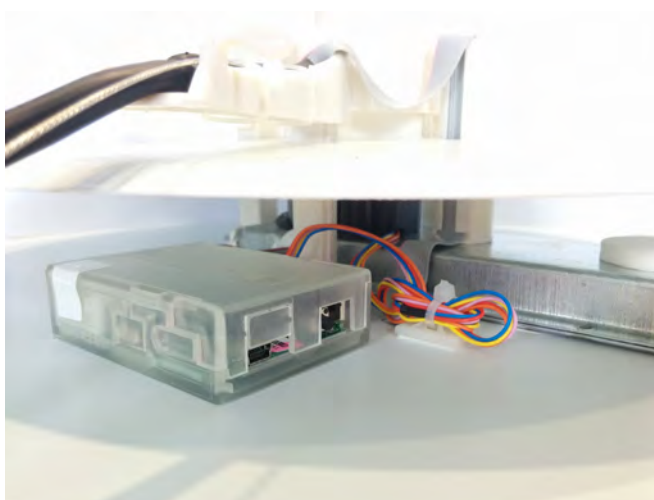
Rickard diffusers are shipped as Onboard Masters or Slaves. Onboard masters control the diffuser by sensing on the diffuser and using the PCB that is plugged into the Diffuser controller located on the trim/plaque of the diffuser.



You can convert a Slave to a Remote Wall Thermostat Master by connecting a Wall Thermostat. Plug the RJ45 cable into the Wallstat connection on the diffuser interface box located on the back of the diffuser.



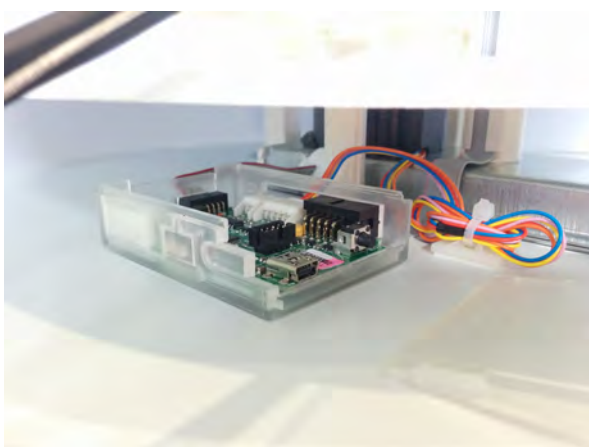
It is also possible to convert a slave to an onboard master if required. Locate the diffuser controller on the trim/plaque of the diffuser



Press the ping button indicated to open the control disc/damper and give you access to the diffuser controller box below.



Remove the lid of the diffuser controller.



Disconnect the power to the diffuser before plugging the onboard controller into the diffuser controller. Failure to do so can result in damage to the system.



Align the connectors and press the onboard controller squarely onto the diffuser controller.



Close the diffuser controller box.



Slave diffusers do not come fitted with a sensor. When an onboard controller is fitted a sensor with sensor cap is included to replace the blank cap.



Remove the blank cap.



Remove the ribbon cable connector from inside the hole.



The ribbon cable connector plugs into the socket in the sensor cap.

Ensure the cap is pressed firmly into place.



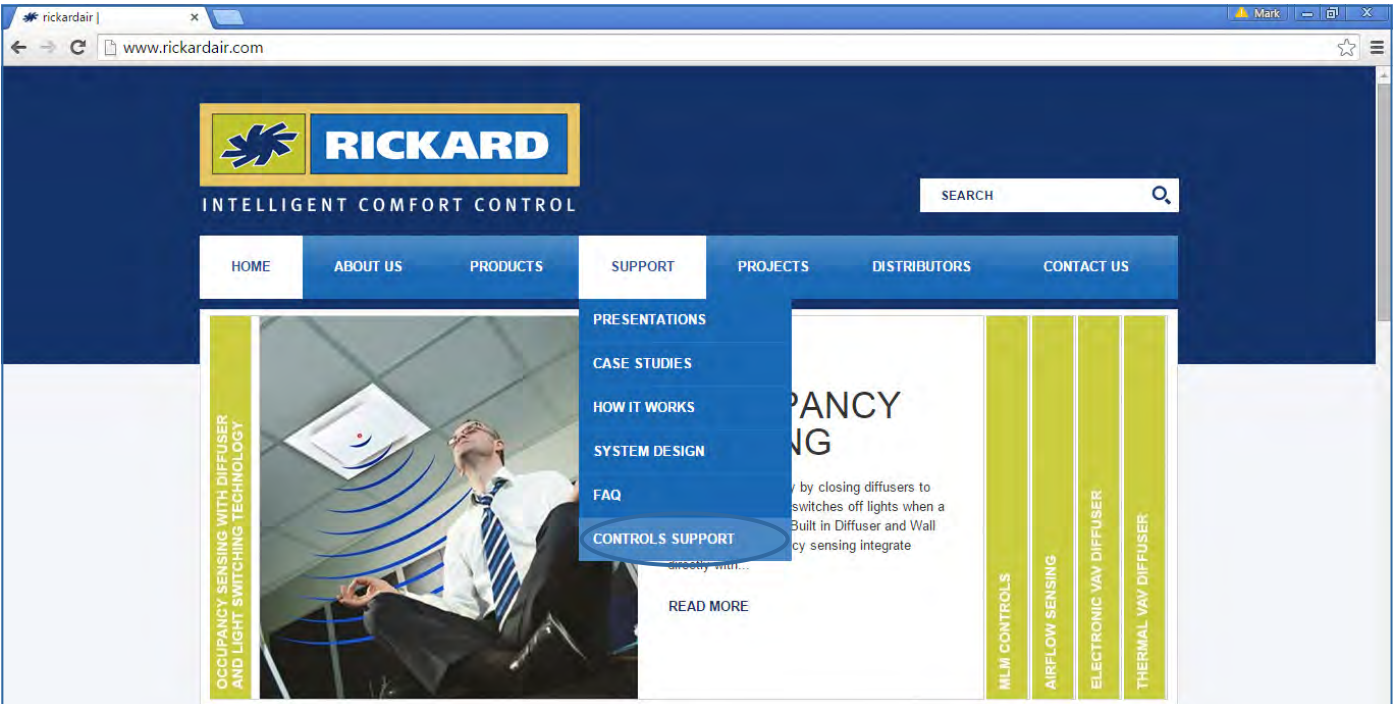
Attach as shown.



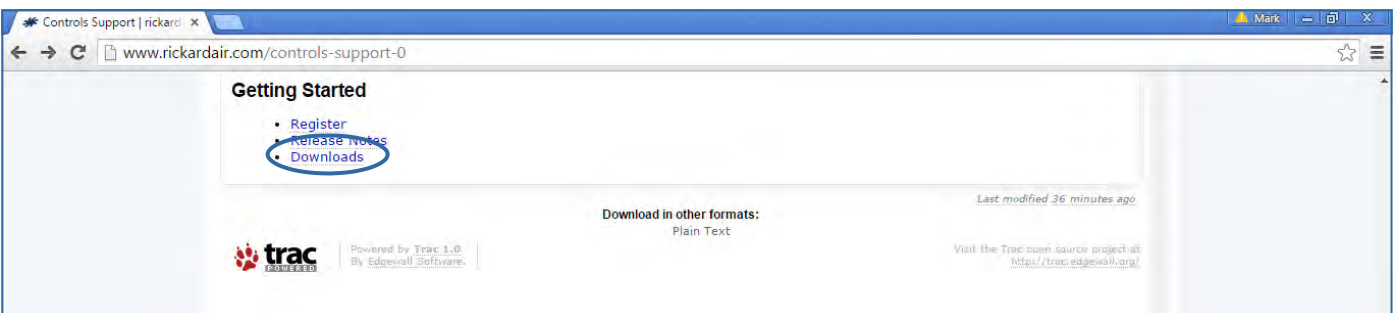
Replace the cap while aligning the tab in the cap with the large slot in the cover plate.



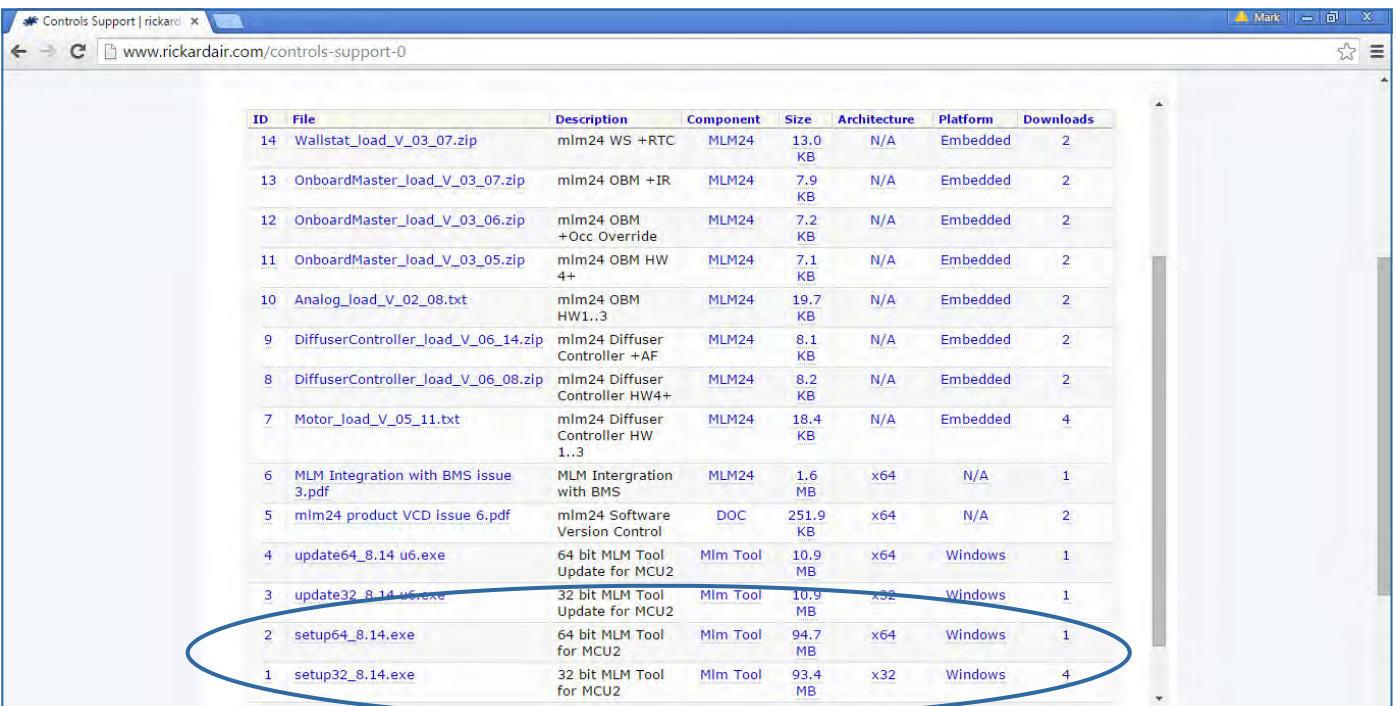
To set-up Rickard diffusers, you need to install Rickards MLM software. If it is not installed follow the following instructions to install it. Go to <http://www.rickardair.com>



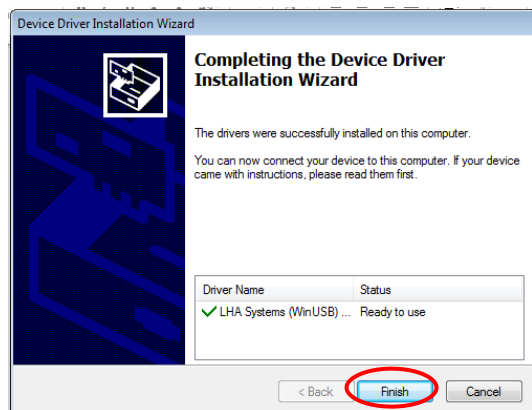
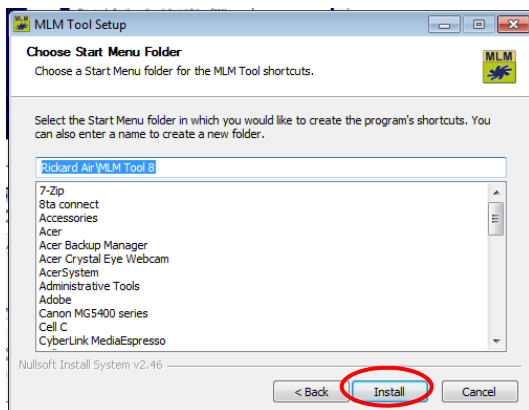
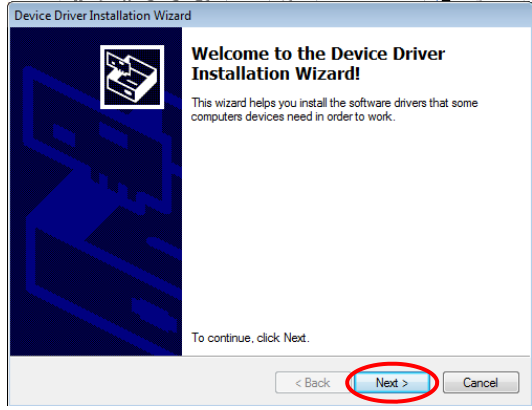
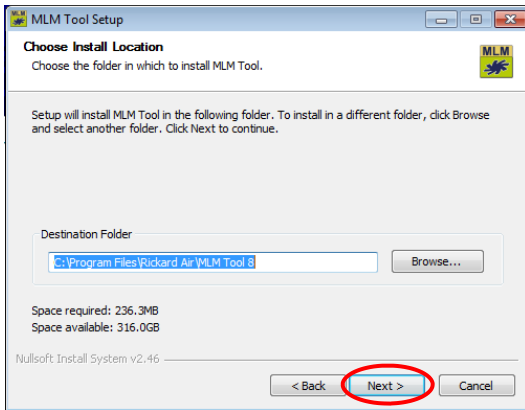
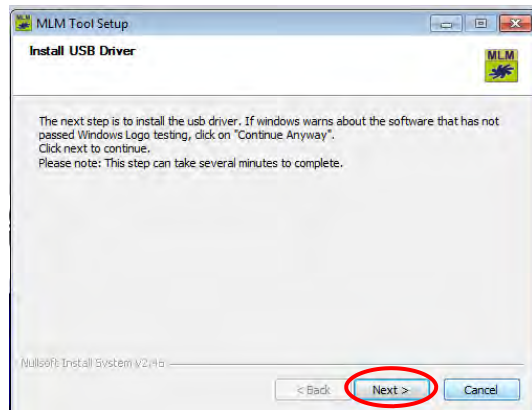
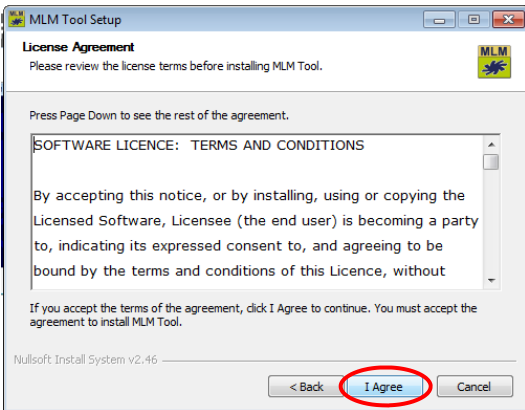
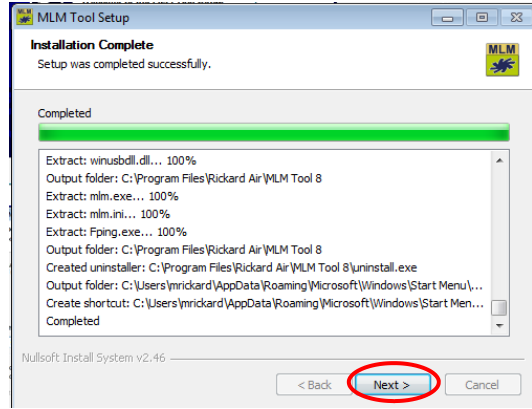
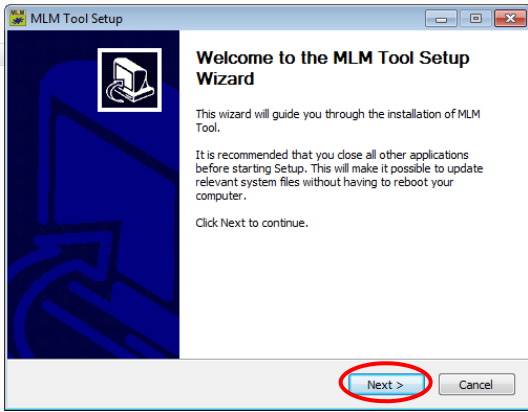
<http://www.rickardair.com/controls-support-0>

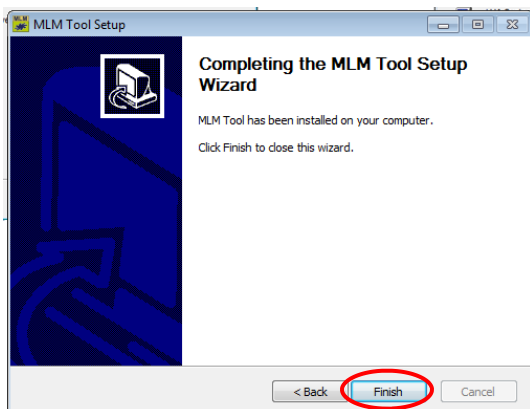
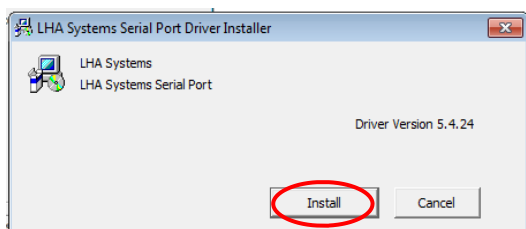
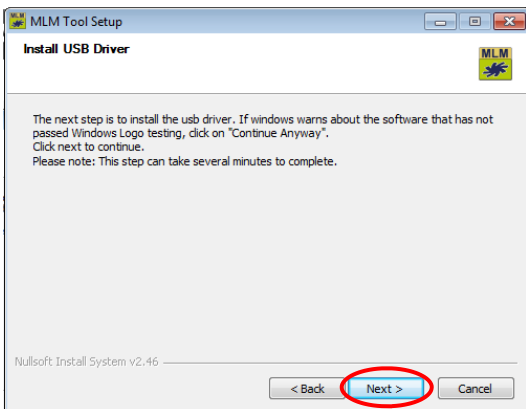
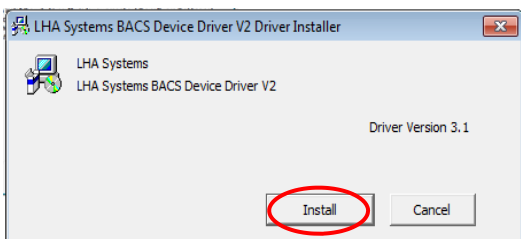
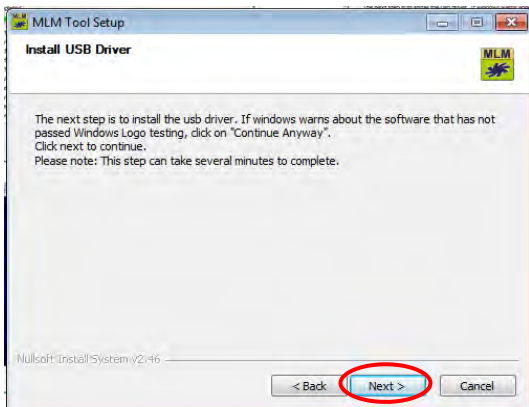


Click on the 32 or 64 bit MLM Tool depending if you have a 32 or 64 bit PC and download the file.



Double click on the file you downloaded and follow these steps.





To connect a single channel to a the MLM application (1 channel is 1 PSU and up to 15 diffusers). Connect the USB modules included RJ9 cable to the PSU as shown.



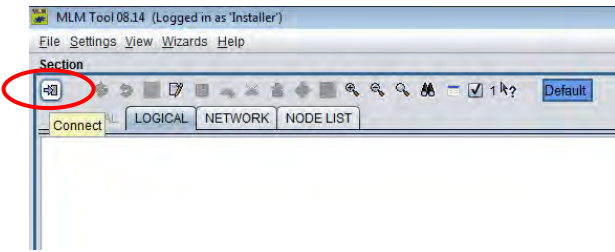
Connect the other end to the USB module as shown. Be sure to plug it into the smaller RJ9 socket, not the larger RJ45 socket.



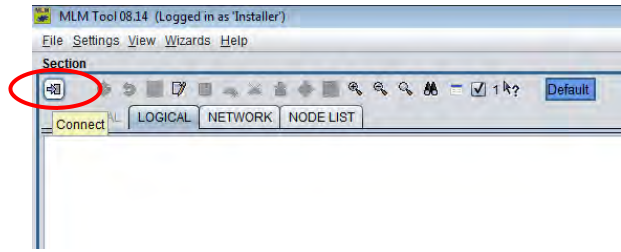
Connect the included USB cable to the USB module and plug the other end into a USB connector in your PC.



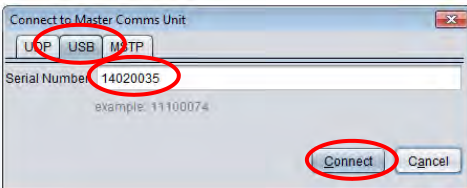
Open the MLM Application and click connect.



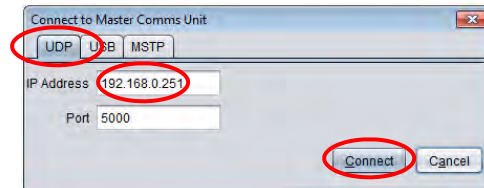
Click Connect.



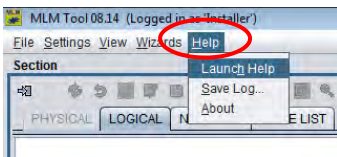
If you are using a USB module, click on the USB tab and type in the serial number written on the USB black box. Click Connect



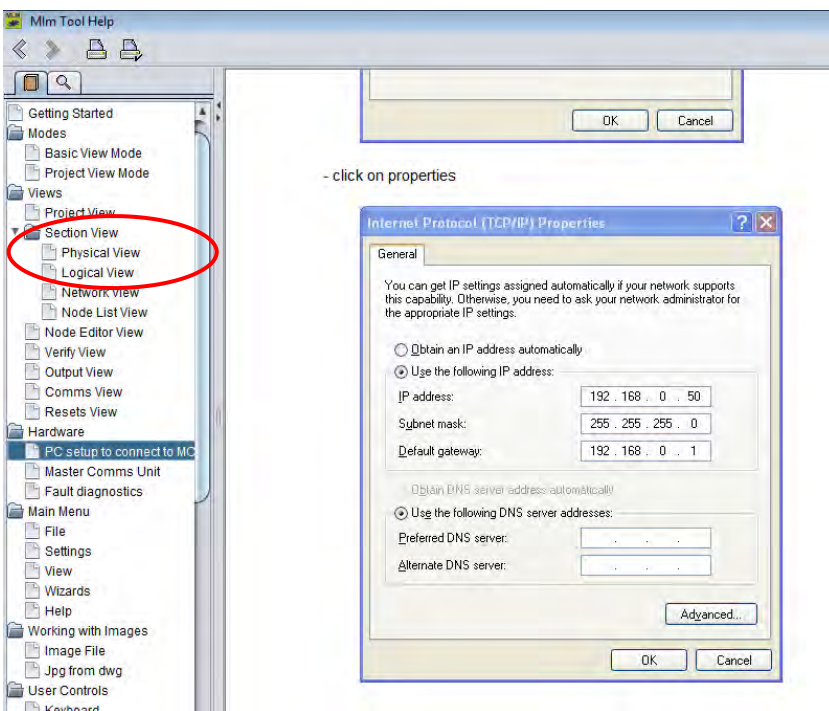
Click on the UDP tab and type in the MCU's default IP address i.e. 192.168.0.251. Click Connect.



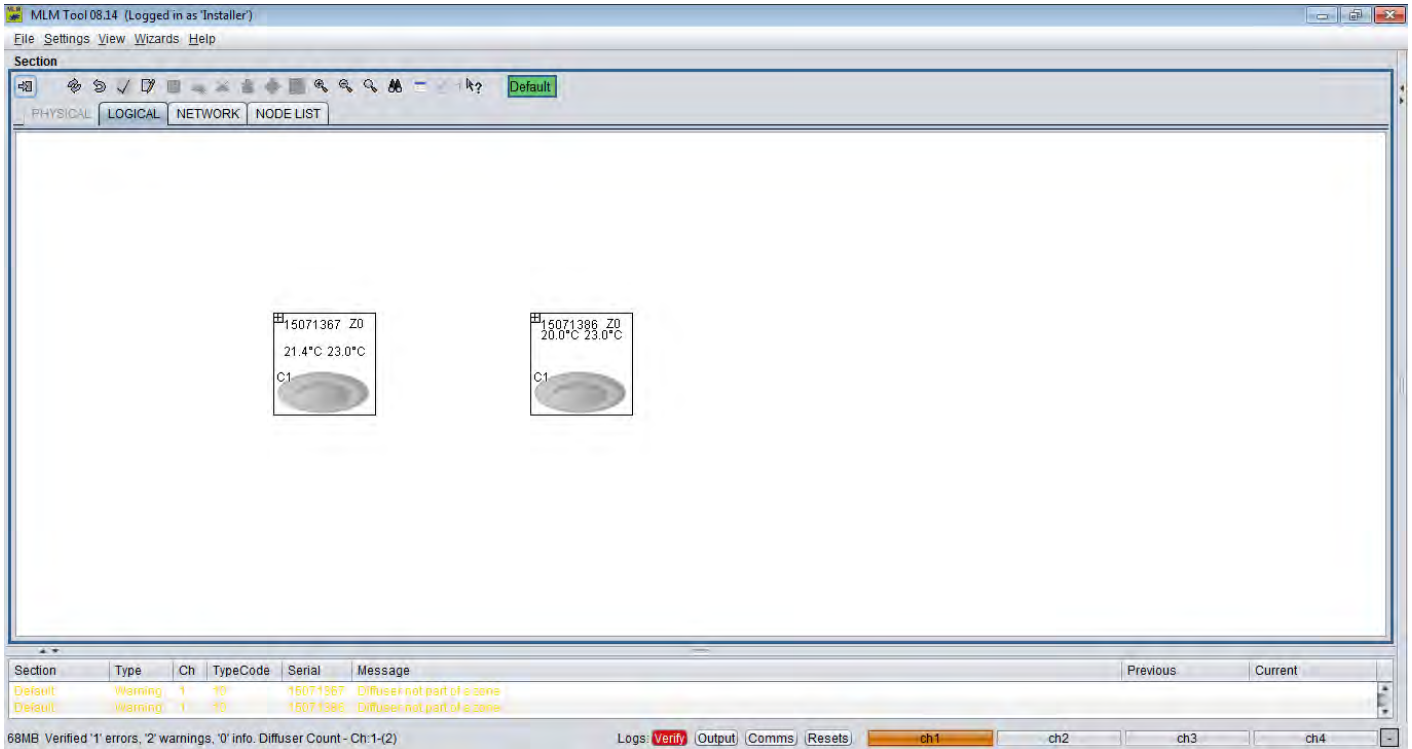
If you are connecting through a MCU module. Make sure your Computers IP address is setup correctly. Please go to the Help menu on the MLM application and select "Launch Help" for instructions.



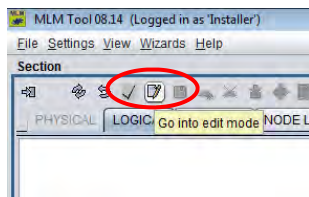
Go to Hardware and PC setup to connect to MCU in the contents menu. Set your PC's IP address correctly.



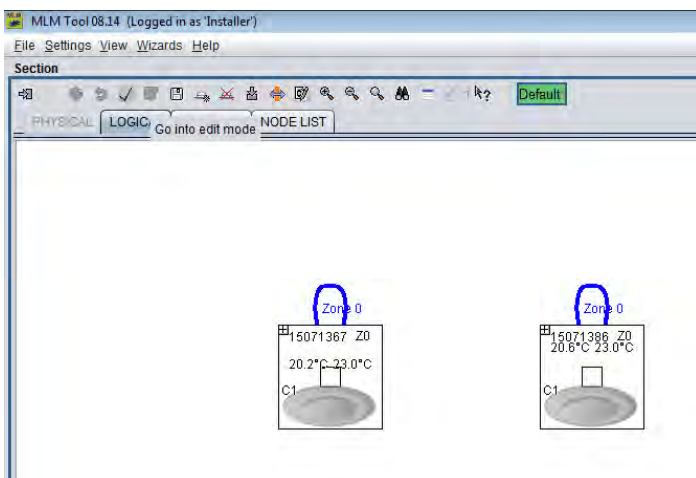
The diffusers you are connected to will look something like this. You will need to wait until the diffusers sync before the diffusers will be visible.



To Zone the diffusers correctly start by clicking on the edit icon shown.

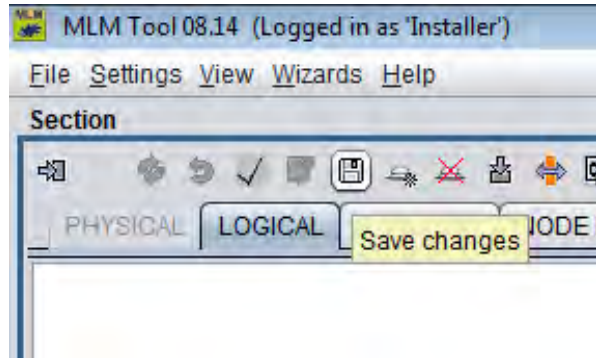
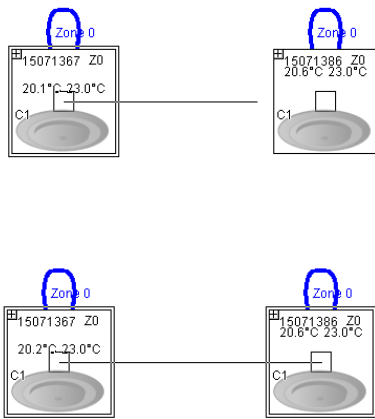


You will now be able to edit the diffusers zones.

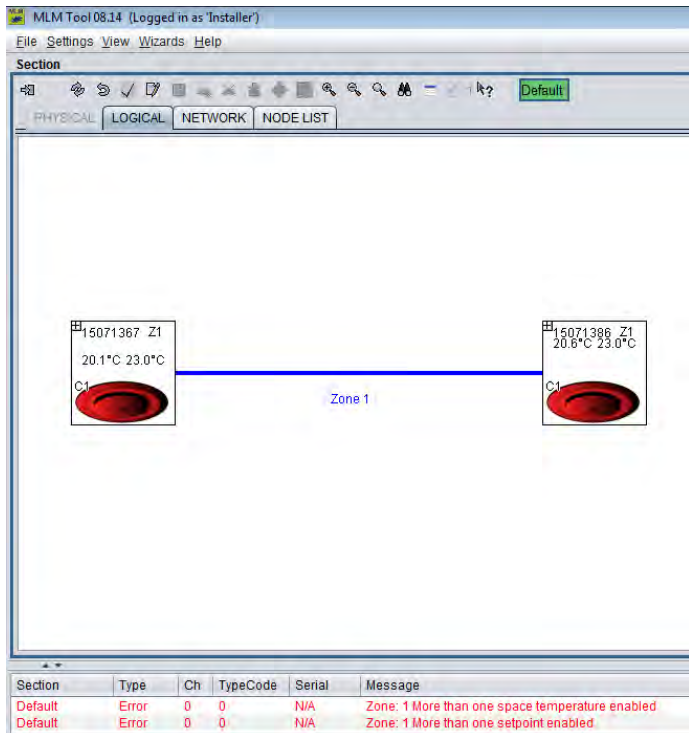
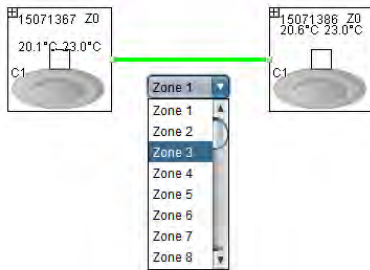


To create one zone between two diffusers, click on the square that is active inside the diffuser icon and drag the connecting line to the diffuser you want to connect to.

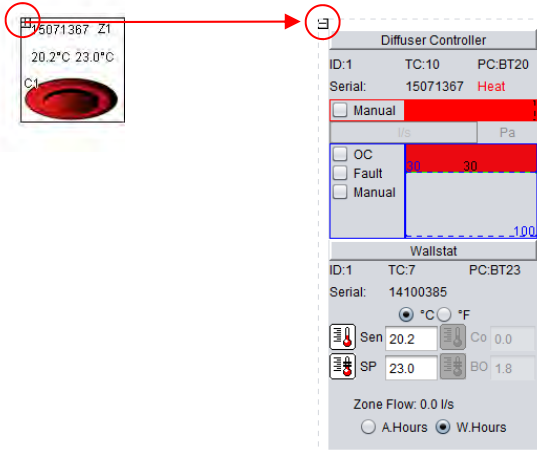
Click on the Save Icon to save the changes.



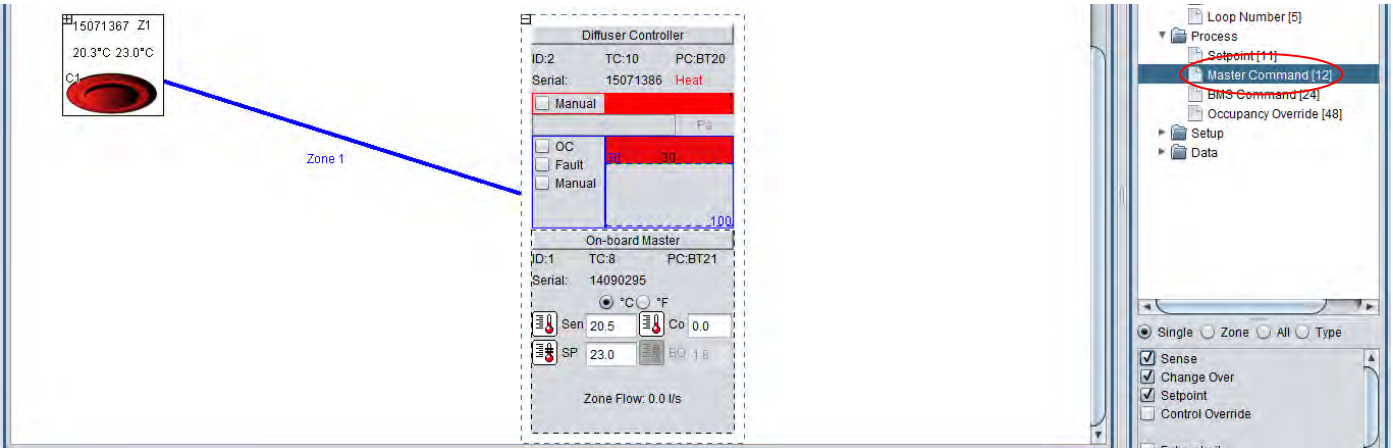
Double click on the line and choose a zone number.



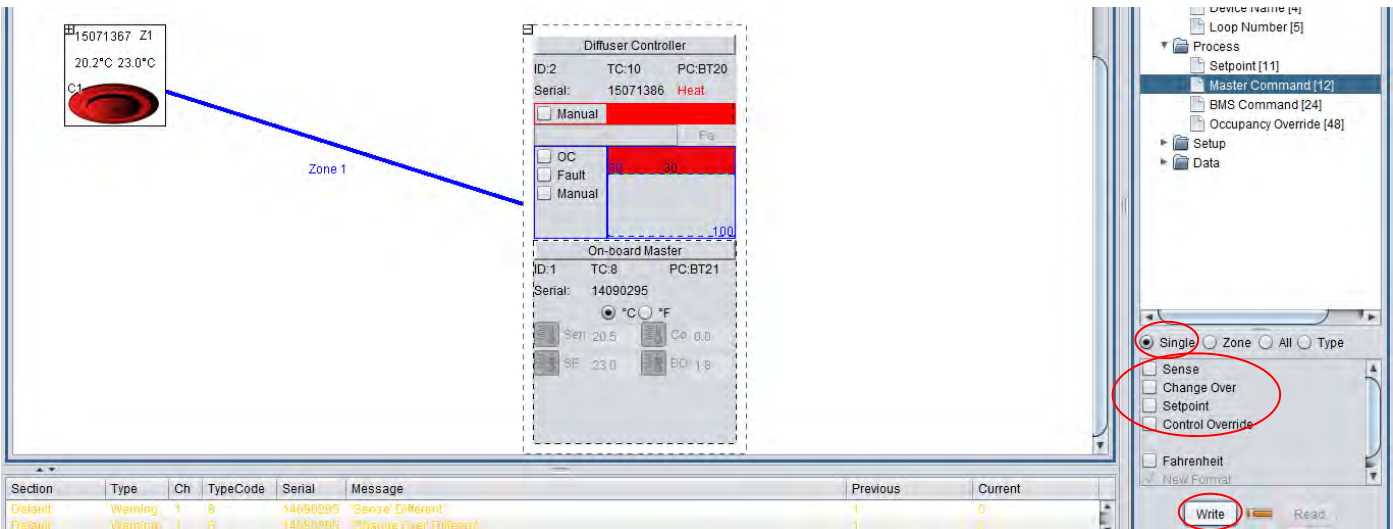
If you connect 2 master diffusers into one zone you must deactivate one master controller. Click on the diffuser + sign to view the controllers attached to the diffuser.



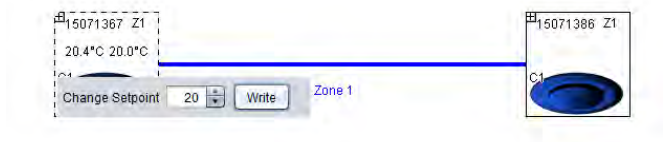
Click on the On-board Master or Wallstat so that its box is highlighted with a hashed line. In the Node Editor panel open the Process Menu and click on Master Command.



Deselect Sense, Change-Over and Setpoint. Be sure to select Single so that only that diffusers settings are changed. Click Write or hit Enter. Zone, All and Type affect changes across the entire Zone, across All the diffusers attached or all the diffusers of that Type respectively.

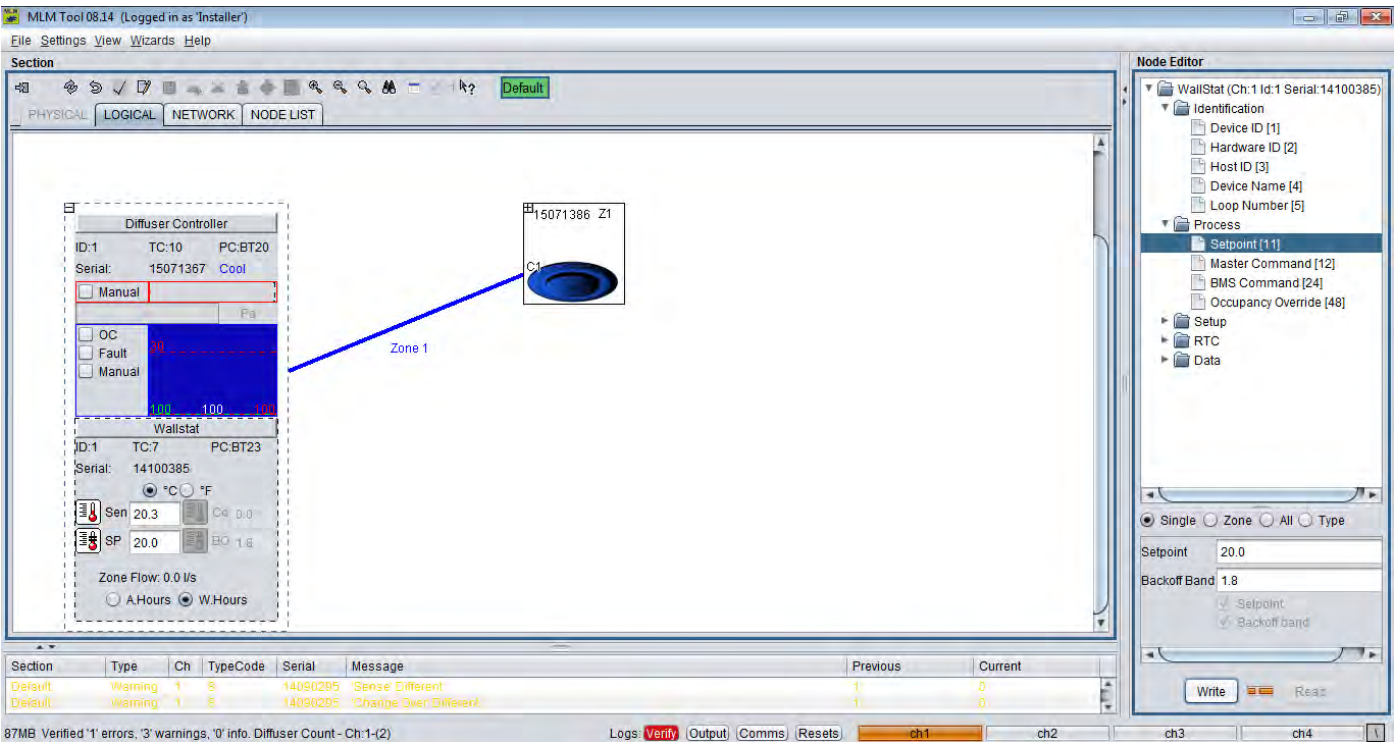


To set the diffuser Setpoint. Double click on the minimised diffuser icon and adjust the setpoint to the desired temperature as shown.



Alternatively maximize the diffuser, click on the On-board or Wallstat Controller, go to Process, Setpoint, type in the new Setpoint temperature and hit Enter or click Write.

Be sure to select Single so that only that diffusers settings are changed. Zone, All and Type affect changes across the entire Zone, across All the diffusers attached or all the diffusers of that Type respectively.



For more help with the MLM Software please go to the help menu shown below.

