Active Thermal Management

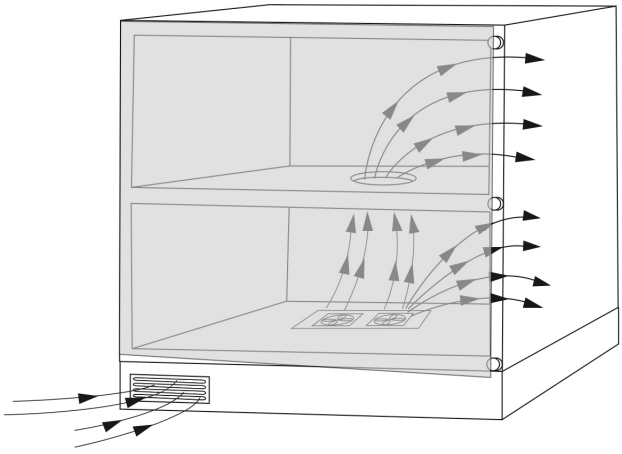
The trusted name in thermal protection

Parts list – before proceeding, check that you have received all of the following:

(1) System 4 control box
(1) fan panel
(1) power supply
(1) thermal probe
(1) grille, metal or wood (if ordered with grille)

System 4 Instructions

The Active Thermal Management System 4 is a self-contained ventilating systems for small-to-midsize enclosures with moderate heat loads. It is NOT intended to be the "first choice" for cooling a cabinet – other ATM products can move significantly more air, but require clearance between the back of the cabinet and the wall or involve more than one visible ventilation opening. When ventilating built-in cabinets, the back of the cabinet is not available, and esthetic considerations may rule out all but the absolute minimum visible openings. The System 4 was developed to answer the challenge of ventilating cabinets using no more than one small visible vent. Room air is drawn under the floor of the cabinet and up into the equipment area by a powerful but very quiet two speed fan assembly. Cool air flows through the equipment rack or shelves before being forced out through the gap between doors or between the doors and the cabinet's frame.



The major individual components are the control box, power supply, and the "six-pack" fan assembly.

25570 Rye Canyon Rd. Valencia, California 91355
(661) 294-7999 voice (661) 294-1115 fax
techinfo@activethermal.com www.activethermal.com

The installation process:

1. The fan panel is dropped into a 3 1/2" x 7 1/2" opening cut in the floor of the cabinet at the rear. Locate the opening where it won't interfere with other equipment, and clean the area under the opening of wood chips, sawdust, dust, etc. so the fans will not bring this material up into the cabinet. Center the panel in the opening after inserting it.

2. Mount the control box in the cabinet where it can be reached for connection/disconnection of fan, power, and probe cables. Note that it has 3 leds. The green led indicates the presence of power, the yellow that the fans are turning at low speed, and the red that the system is in high speed mode (the yellow led remains on in high speed mode.)

3. Connect the fan wires to ANY of the 4 fan terminal blocks. The red wire connects to any "+" terminal, the black to any "-" terminal.

4. The grille, either wood or aluminum, is installed in a 2" x 7" opening cut in the base trim of the cabinet. Metal grilles are retained by clips; wood ones can be mounted using the supplied 2-sided adhesive tape or screws. (Holes are not provided as most installations use tape or glue for fastening.) Remove any sawdust, etc., under the cabinet before final installation of the grille.

5. The gap between doors or between doors and the cabinet's frame should be measured. Most two-door cabinets are built with a 1/8" gap between the doors; many single-door cabinets have door-to-frame gaps of differing widths, depending on the type of construction. If the gap(s) are too small, insufficient cooling may result; use the adhesive-backed bumpers provided to increase the door gaps. The bumpers can be placed between the leaves of a hinge or between a door and the cabinet's frame.

6. The thermal probe is placed where it will be most effective. It can either be located on the major heat-producing component in the enclosure or near the top, where it can sense the combined heat of all components in the enclosure. ***Some experimentation may be necessary to find the optimum location for the probe.***

7. Test the system:

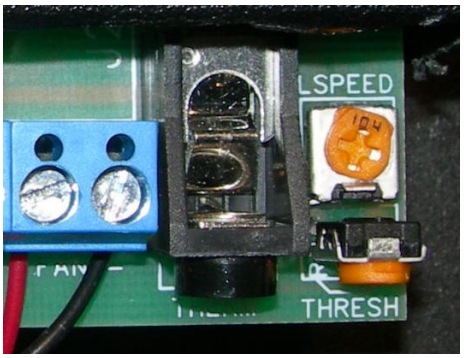
   Plug the power supply into an AC outlet. (The probe should NOT be plugged into the connector on the control box.) The green, yellow, and red leds should all light, and the fans should run at full speed.

   Plug the thermal probe into its connector on the control box. If the probe is in an environment below about 90 degrees, the fans should stop and the yellow and red leds should extinguish.

25570 Rye Canyon Rd. Valencia, California 91355
(661) 294-7999 voice (661) 294-1115 fax
techinfo@activethermal.com www.activethermal.com

Using a hair dryer (NOT an open flame or heat shrink gun), warm the tip of the thermal probe. At 90 degrees, the fans should begin to turn at low speed, and the yellow led should light. At about 100 degrees, the fans should switch to full speed, and the red led should light (the yellow led will remain on).

The temperature at which low speed operation begins can be adjusted by turning the “THRESH” control; how fast the fans turn in low speed operation can be adjusted by turning the “L SPEED” control as shown in the picture below.



Note: High speed operation will always begin 10 degrees above the low speed starting temperature.

25570 Rye Canyon Rd.
(661) 294-7999 voice
techinfo@activethermal.com

Valencia, California 91355
(661) 294-1115 fax
www.activethermal.com