

# IMPORTANT NOTICE

## TO INSTALLERS OF SOLID STATE EQUIPMENT IN PIPE ORGANS

June 1993

We recently discovered a correlation between several instances of unexplained failures and occasional erratic operation of some pipe organ control systems, and Astron brand rectifiers that have an internal connection from the D.C. negative output terminal and to earth ground. The third, or grounding plug on the Astron's line cord is **and should be** connected to the rectifier's chassis. However, Astron often provides a wire from the Negative D.C. output terminal to a stud on the chassis, which then provides a path from D.C. Negative through the line cord to earth ground. We have determined that when the Astron supply is used in conjunction with Peterson solid state systems for the pipe organ, this connection should be removed to isolate the D.C. Negative output terminal from the chassis.

Problems can occur for several reasons in solid state equipment built by virtually any manufacturer, if this path to earth ground is in place. With the wire connected, 60 cycle hum can appear in the D.C. circuit, which may create undesirable noise in audio circuits. Vulnerability to damage from lightning can be much higher if the D.C. Negative is grounded because a static charge may place a high voltage at one end of a long wire, and since the other end of the wire is at ground, a high voltage may be caused to appear across the wires, instantly damaging the equipment. There can also be referencing problems wherein notes or stops may not turn off dependably when this earth ground connection is made and two or more Astron rectifiers are connected together in certain ways.

Fortunately, these problems may be easily avoided by simply removing the wire coming from the Organ Negative output terminal from the chassis stud or by clipping out both ends of the wire. **This must be done with the power to the rectifier disconnected!** Be sure to wrap any remaining clipped or disconnected wire ends with electrical tape. Whenever more than one rectifier is used in an organ, please contact Astron or your Astron distributor for their recommendations on how to wire the rectifiers.

Thank you for your cooperation. A few minutes spent now removing this wire may save much time and effort trying to diagnose problems in the future.

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