

## Polycom® SoundPoint® IP Technical Bulletin 1/27/04

This information applies to:

- SoundPoint IP 500
- IEEE 802.3af Inline Power Cable (Part No. 2200-11077-001 Rev A)
- PowerDSine Power over LAN Midspan unit models:
  - PD-6024/AC-X
  - PD-6024/ACDC-X
  - PD-6024/DC-X
  - PD-6024/AC/M-X
  - PD-6024/ACDC/M-X
  - PD-6024/DC/M-X
- Red-Hawk/CDT BL8000-series

### SYMPTOMS

When SoundPoint IP 500 is powered via the optional IEEE802.3af Inline Power Cable on certain PowerDSine Midspan Power over LAN units (refer to PowerDSine model numbers above), the Midspan units may overload and fail after 13 or more phones have been connected. This causes power to be suspended to all phones connected to the Midspan unit.

### CAUSE

Midspan Power over LAN units are typically installed in conjunction with standard terminal switches (example: Cisco 2950). If these switches use ganged RJ-45 connectors, a ground loop may be formed between shared terminations on the Midspan unit. This causes the Midspan unit to allocate current to multiple phones on a single port which then causes the Midspan unit to go into fault mode and suspend power to phones after reaching the maximum power dissipation of the unit. Problems have been reported using 24-port Midspan units upon reaching a limit of 13 Inline Power Cable connections. Full list of terminal switches using ganged RJ-45 connectors is incomplete at this time.

The released version of the IEEE Specification (now referred to "IEEE802.3af-2003") now necessitates that all Powered Devices (example: Polycom IEEE802.3af Inline Power Cable) should add circuitry to prevent ground loops from forming.

Polycom cable 2200-11077-001 Rev A precedes this IEEE802.3af-2003 specification.

Midspan Power over LAN units with separate Power Supply for each port (example: RedHawk/CDT BL8000 –series) do not exhibit this problem.

## **SOLUTION**

Customers experiencing the issue above should use a revised cable. Similarly, customers who intend to install networks using ganged RJ-45 connector terminal switches in conjunction with the PowerDsine Midspan units should use this new revision IEEE802.3af Inline Power Cable with Polycom SoundPoint IP 500 models. Part number of this new revision cable is as follows:

### **2200-11077-002 Rev A**

This cable interoperates with the following switch modules providing power over Ethernet:

PowerDsine 30012/3006  
PowerDsine 6001  
PowerDsine 64012  
PowerDsine 6024  
Extreme Summit 300-48 Helium Rev A  
Nortel Baystack 460-24T  
Red Hawk BL-8520  
Red Hawk BL-6524  
3Com NJ105  
3Com NJ220  
3Com NJ200 Old  
3Com NJ200 New  
3Com NJ100  
3Com 4400  
Cisco WS-X4248-RJ21V  
Cisco WS-X4548-GB-RJ45V  
Avaya P333T  
HP Procurve 2650

## **STATUS**

Customers should check with their local reseller or distributor for latest availability of the new revision of Polycom IEEE802.3af Inline Power Cable.

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