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**Document Version:** Version 1.0

**Software Version:** PIKA MonteCarlo 5.6 or greater

**Product(s):** PIKA Daytona MM boards

**Purpose:** 24V Viking Power Supply requires a minimum current draw.

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### Description:

The external 24V Viking power supply provides two power outputs. What has recently been discovered is that the lack of sufficient loading on the 24-volt DC power output can affect the 72-volt AC power output.

- 24 volt DC power output for loop powering of the telephone sets connected to the Daytona MM cards with SLIC interfaces
- 72 volt AC ringing power output used to ring the telephone sets connected to the Daytona MM cards with SLIC interfaces

If the 24 volt DC power output is not drawing a minimum amount of current then the 72 volt AC ringing power output will not be properly generated. The result is the 72-volt AC ringing power output will be of reduced amplitude, the AC ringing waveform distorted, and its DC bias level reduced. This degraded ringing waveform causes the operation of the Daytona MM SLICs to sometimes not properly ring the telephone sets when desired. The net result of this is telephone sets cannot be reliably rung when the degraded 72-volt AC ringing power output is used to ring a telephone set connected to the Daytona MM card's SLIC Interfaces.

This problem occurs only when the 24 Viking power supply is used with Daytona MM cards containing less than 8 SLIC interfaces AND all telephone sets are on hook AND then one or more telephone sets are rung.

One SLIC being off hook is sufficient to drawing enough current from the 24 volt DC power to make the 72 volt AC ringing power output operate correctly.

Possible Solutions:

1. Deploy Daytona MM boards with 8 or more SLIC modules when powered by the 24V Viking Power supplies.
2. Apply a load on the 24V DC power output to draw the minimum current needed to ensure the proper generation of the ringing voltage. The minimum current required is 10 mA. This corresponds to a load resistance of 2400 ohms. Power rating of the resistor should be 1/2 watt. The minimum loading resistance should be connected between the 24V DC power output and Ground of the Viking power supply.
3. Use a different power supply that provides the needed 24V DC power output and 72V AC ringing power output without degradation.