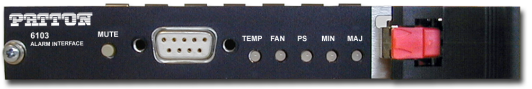
USER MANUAL

Model 6103
3U ForeFront Alarm Card



PATTON Electronics Co.

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SALES OFFICE
(301) 975-1000
TECHNICAL SUPPORT
(301) 975-1007

ISO 9001 CERTIFIED

An ISO-9001 Certified Company

CONTENTS

1.0 WARRANTY INFORMATION

Patton Electronics warrants all Model 6103 components to be free from defects, and will—at our option—repair or replace the product should it fail within one year from the first date of shipment. This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as warranted, your sole recourse shall be repair or replacement as described above. Under no condition shall Patton Electronics be liable for any damages incurred by the use of this product. These damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. Patton Electronics specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

1.1 RADIO AND TV INTERFERENCE

The Model 6103 generates and uses radio frequency energy, and if not installed and used properly—that is, in strict accordance with the manufacturer's instructions—may cause interference to radio and television reception. The Model 6103 has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection from such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. If the Model 6103 does cause interference to radio or television reception, which can be determined by turning the power off or disconnecting the RS-232 interface, the user is encouraged to try to correct the interference by one of the following measures: moving the computing equipment away from the receiver, re-orienting the receiving antenna and/or plugging the receiving equipment into a different AC outlet (such that the computing equipment and receiver are on different branches).

1.2 CE NOTICE

The CE symbol on your Patton Electronics equipment indicates that it is in compliance with the Electromagnetic Compatibility (EMC) directive and the Low Voltage Directive (LVD) of the Union European (EU). A Certificate of Compliance is available by contacting Patton Technical Support.

1.3 SERVICE

All warranty and non-warranty repairs must be returned freight prepaid and insured to Patton Electronics. All returns must have a Return Materials Authorization number on the outside of the shipping container. This number may be obtained from Patton Electronics Technical Service at: .

Tel: ***(301) 975-1007***

E-mail: ***support@patton.com***

URL: ***www.patton.com***

> ***Note*** Packages received without an RMA number will not be accepted.

Patton Electronics' technical staff is also available to answer any questions that might arise concerning the installation or use of your Model 6103. Technical Service hours: ***8AM*** to ***5PM EST***, ***Monday*** through ***Friday***.

2.0 GENERAL INFORMATION

Thank you for your purchase of this ***Patton Electronics*** product. This product has been thoroughly tested and is warranted for One Year parts and labor. If you have questions regarding the installation or use of this product, please contact ***Patton Electronics Technical Support*** at ***(301) 975-1007***.

2.1 PRODUCT FEATURES

- Six LED alarm indicators
- Fits in Patton's Model 6276 and Model 6476 Forefront chassis assembly
- Alarm relay presented on Form C (DB-9)
- Alarm cut off switch
- Auto-interlock mechanism for reliable connections to Forefront chassis

2.2 DESCRIPTION

The Model 6103 Forefront Alarm Card is intended for use in Patton's Model 6276 and Model 6476 Forefront Chassis Assembly. The Model 6103 continuously monitors the fan tray tachometer signals, power supply, and the chassis temperature for alarm conditions. Upon reception of an alarm condition the Model 6103 will illuminate the rear panel indicator LED's and will complete one of two circuits through the Form-C output. When the alarm condition has been cleared the Model 6103 will reset all LED's and the Form-C output and return to normal operating mode.

3.0 OPERATION

Upon plugging the Model 6103 into the chassis, the unit will perform an LED self-test. After succesful completion of this self-test the Model 6103 will be in normal operating mode and will monitor the fan tachometers, the power supply, and the temperature in the chassis on a continual basis.

Rear Panel LEDs

The Model 6103 features five rear panel bi-color LEDs that display the current state of the ForeFront system. Figure 1 shows the rear panel location of each LED. Following Figure 1 is a description of each LED's function.

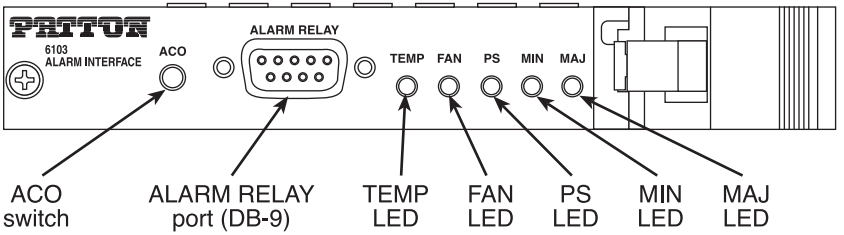

Figure 1. Rear panel LEDs, ACO switch, and Alarm Relay port locations

- ***TEMP indicator***—Glows yellow in the case of a temperature alarm or green when there is no temperature alarm.
- ***FAN indicator***—Glows yellow in the case of a fan tachometer alarm or green when there is no fan tachometer alarm.
- ***PS indicator***—Glows yellow in the case of a power supply alarm or green when there is no power supply alarm.
- ***MIN indicator***—Glows yellow in the case of a minor alarm condition or green when there is no minor alarm condition.
- ***MAJ indicator***—Glows red in the case of a major alarm condition or green when there is no major alarm condition.

For a description of when the LEDs illuminate, refer to Section 4.0

Indicator Function	***LED color under normal & alarm conditions***	
	Normal	***Alarm***
TEMP (Temperature) status	Green	Yellow
FAN status	Green	Yellow
PS (Power Supply) status	Green	Yellow
MIN (Minor) Alarm staus	Green	Yellow
MAJ (Major) Alarm status	Green	Red

Form-C Outputs

The Model 6103 is equipped with two Form-C relay outputs presented on a DB-9 connector located on the rear panel (see Figure 1 on page 6). In the event of an alarm, the Model 6103 will complete one of two circuits through this Form-C connector. A Form-C relay has three contacts: normally open, normally closed, or a common contact.

Note Contact ratings are 2 amps at 24 VDC.

In the event of a minor alarm, the Model 6103 will connect pin 5 to pin 9. In the event of a major alarm, the Model 6103 will connect pin 2 to pin 6.

Alarm Cut Off Switch

The Model 6103 is equipped with an alarm cut-off switch (ACO) on the rear panel as shown in Figure 1 on page 6. If an alarm occurs and you want to temporarily turn off the form-C output, press the ACO button to do so. If the system is in a minor alarm state and you press the ACO button, the minor (MIN) alarm LED will blink. If you are in a major alarm state and you press the ACO button, the major (MAJ) alarm LED will blink. To return the relays to the alarm condition, press the ACO button a second time.

Alarm LED information

The Model 6103 alarm card monitors the following items: fan tray, power supply, and chassis temperature.

Note During any alarm condition there will always be at least two LEDs illuminated, one for the monitor (FAN, TEMP, PS) and one for the status (MIN, or MAJ).

Fan monitor

The Model 6103 monitors the fan tray tachometer signals. If a fan tray alarm signal is detected the alarm card will illuminate the FAN LED. The Model 6103 will also illuminate either the MIN or the MAJ LED depending on the status of the alarm condition.

Temperature Monitor

The Model 6103 monitors the temperature inside the chassis. If a temperature alarm is detected the alarm card will illuminate the TEMP LED. The Model 6103 will also illuminate either the MIN or the MAJ LED depending on the status of the alarm condition.

Power Supply Monitor

The Model 6103 monitors the chassis power supplies. If a power supply alarm is detected the alarm card will illuminate the PS LED. The Model 6103 will also illuminate either the MIN or the MAJ LED depending on the status of the alarm condition.

Alarm Conditions

The following sections describe the conditions that set the alarms for each of the three monitors.

Fan Tray Alarm Conditions

The Model 6103 monitors the tachometer signal on all the fans in the chassis. If the following conditions occur, then an alarm will be set:

For minor fan alarm:

- One fan has dropped to 1/2 speed.

For major fan alarm:

- Two or more fans have dropped to 1/2 speed.
- One or more fans have dropped to 3/8 speed.

Temperature Alarm Conditions

The Model 6103 monitors the temperature in the chassis through an on-board temperature sensor. If the following conditions occur, then an alarm will be set:

For minor temperature alarm:

- Temperature in the chassis reaches 140°F (60°C).

For major temperature alarm

- Temperature in the chassis reaches 158°F (70°C).

Power Supply Alarm Conditions

The Model 6103 monitors the power supplies in the chassis. If the following conditions occur, then an alarm will be set:

For minor power supply alarm:

- Alarm card receives a *degrade* signal from a power supply.

For major power supply alarm:

- Alarm card receives a *fail* signal from a power supply.

APPENDIX A
FORM-C CONNECTOR PIN ASSIGNMENTS

Pin	*Function*
1	Major Normally Closed
2	Major Normally Open
3	GND
4	Minor Normally Closed
5	Minor Normally Open
6	Major Common
7	N/C
8	N/C
9	Minor Common

Notes

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