

46019 SUMMARY ALARM MODULE (SAM)

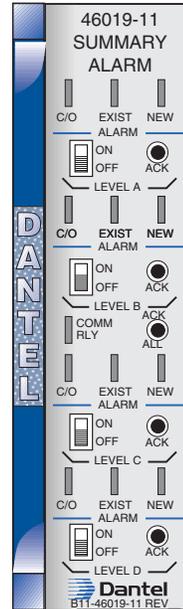


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About this Practice:

This practice has been reissued to:

- Meet ISO 9001 requirements.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

Issue date: February 1998

UPDATED

CAUTION

- Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.
- Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).
- Keep circuit boards in their antistatic bags when they are not in use.
- Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.
- For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

ORDERING INFORMATION

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, **1-800-432-6835**.

OPTION NUMBER	FEATURES
B11-46019-11	Summary Alarm Module (SAM)

GENERAL DESCRIPTION

The 46019 Summary Alarm Module (SAM) controls audible and/or visual alarms for four alarm levels (A through D) at a Dantel 460 Alarm and Control System processing center. Use the SAM with the 46018 Audible Alarm.

The front panel includes:

- ◆ Status indicating LEDs
- ◆ Switches
- ◆ Push buttons

The module is a plug-in PC board that fits into any 400-type or similar equipment housing. The SAM does not accept subassemblies.

The SAM operates on -21 to -56 VDC input power.

CIRCUIT DESCRIPTION

Fig. 1 shows the 46019 Summary Alarm Module functional schematic. Here is a brief description of each of the functional parts of the circuit:

TTL/Optically Coupled Inputs

A standard TTL input and an optically coupled (OC) input represent each alarm level (A, B, C and D). Either input drives the latch and gate circuit which operates the relay coil representing that input's level and the common coil.

Latch/Gate Circuit

The TTL or OC input enables the latch and gate circuit for each of the four inputs. Output from the latch and gate circuit drives the relay coils and individual LEDs for indicating:

- ◆ A new alarm (NEW)
- ◆ Existing alarm (EXIST ALARM)
- ◆ The operation of the common relay output (COMM RLY).

CIRCUIT DESCRIPTION

A strap position configures each Latch/Gate circuit to:

- ◆ **Latch:** Hold alarm status until released by an external source.
- ◆ **Follow:** Release alarm status when the alarm input returns to normal.

Reset Inputs and Acknowledge

Each alarm input has an individual reset input and acknowledge button. Initiate reset by applying a standard TTL signal at the appropriate edge connector pin.

Each Latch/Gate circuit also has a front panel button (ACK) which acknowledges alarm status and resets the relay. You can acknowledge by pressing the front panel “ACK ALL” button, the master reset or the acknowledge timer.

Disable the audible alarm by setting the front panel cutoff switch to ON.

Output Relays

An individual form-C relay for each alarm level and a common relay shared by all levels provide external alarm indications.

Each level latch and gate circuit energizes that individual level relay's operating coil. Each relay has two sets of relay contacts (visual and audible). Each set has normally open (NO) and normally closed (NC) contacts.

The common relay operates on any alarm level and remains ON until all alarms (whether they follow or latch) clear or are acknowledged.

TTL/OC Master Reset

A master reset with TTL and OC inputs resets all levels (A, B, C and D) at the same time. Reset levels by applying a single signal to the appropriate edge connector pin.

Acknowledge Timer

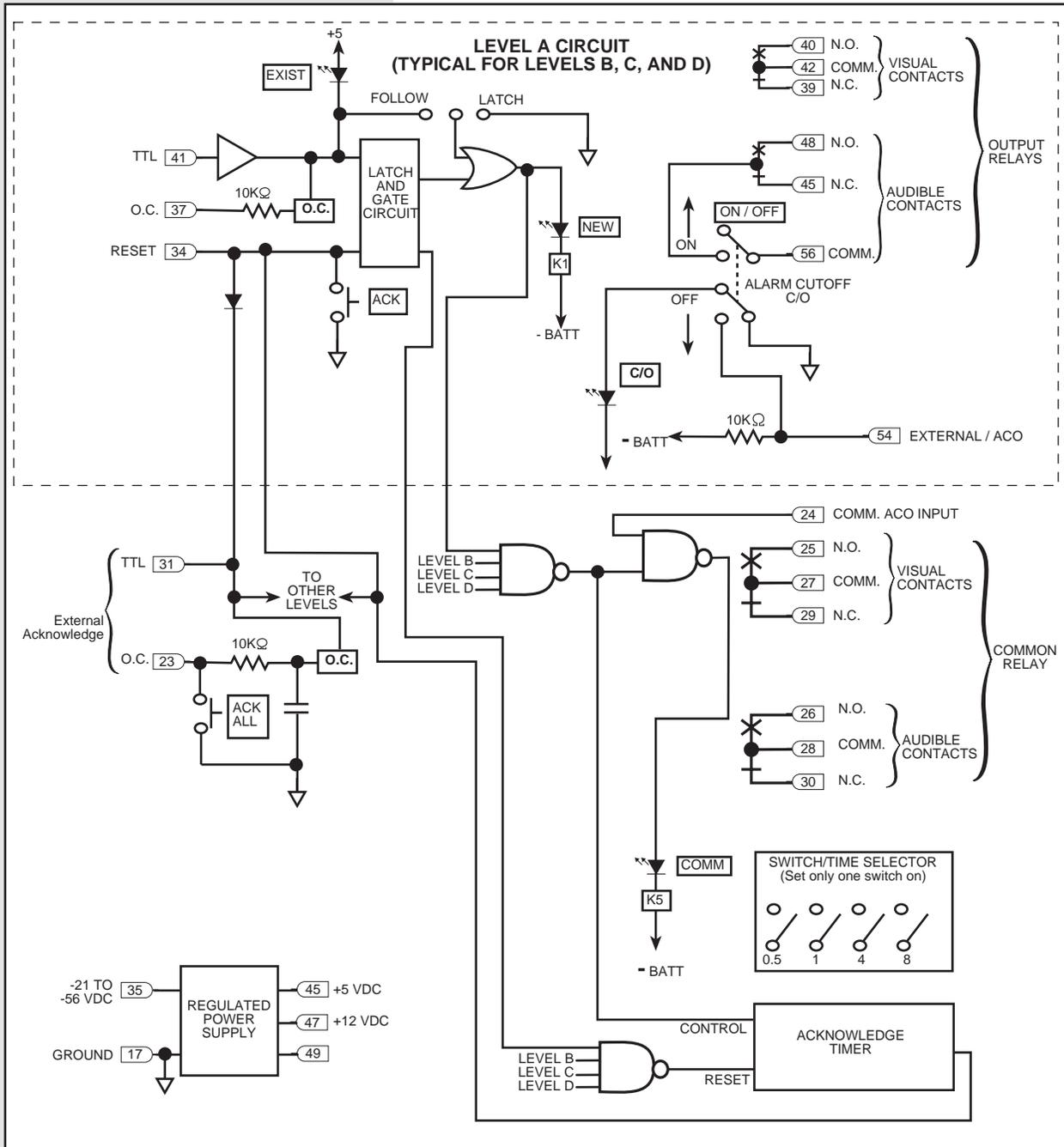
An acknowledge timer automatically acknowledges alarms after the preset time interval expires. You can set the unit for a 0, 0.5, 1.0, 4.0 or 8.0 minute delay. If the timer is partially through a timing cycle when an additional alarm status change occurs, the timer begins again with the new alarm.

Regulated Power Supply

The regulated power supply operates on -21 to -56 VDC input power and provides ± 12 VDC and +5 VDC output power for the SAM circuits. The ± 12 VDC and +5 VDC output power routes to edge connector pins for off-board use.

CIRCUIT DESCRIPTION

Fig. 1 - FUNCTIONAL SCHEMATIC, 46019 SAM

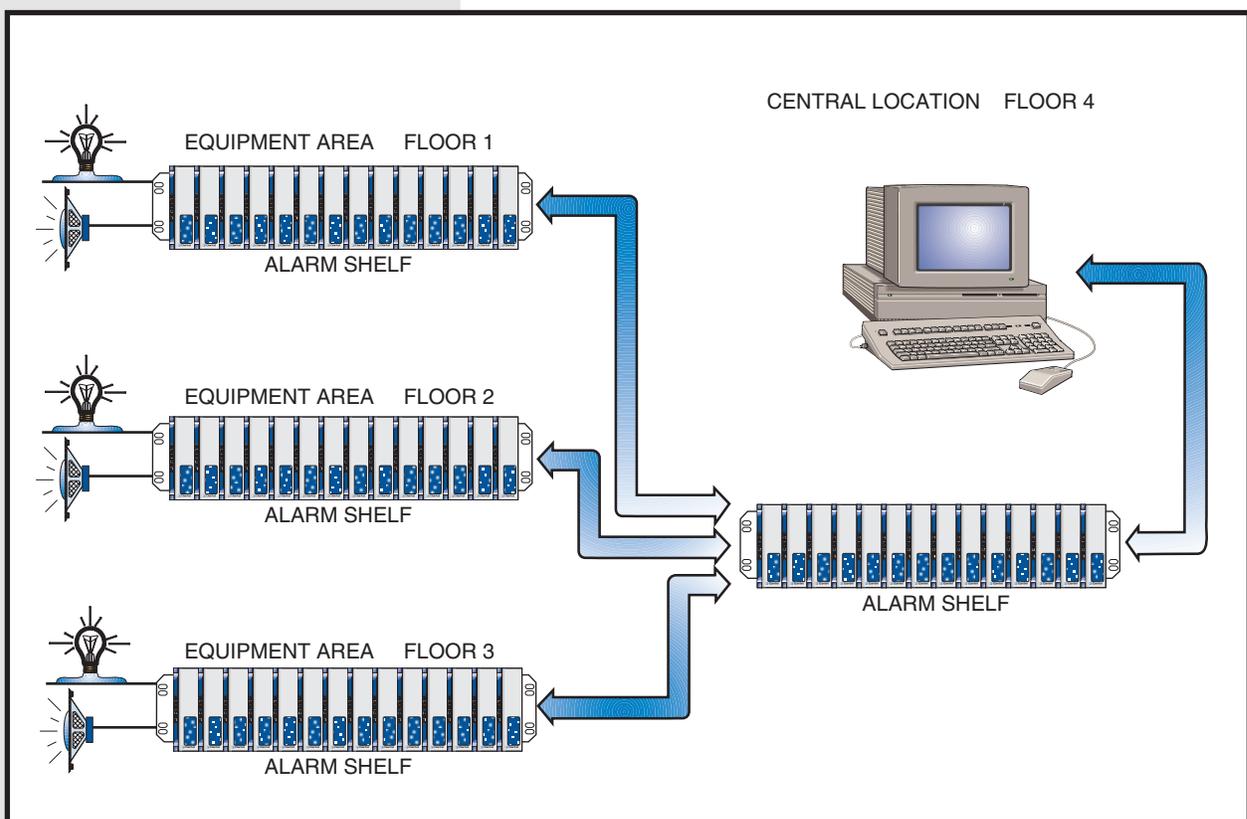


APPLICATION INFORMATION

Fig. 2 shows a 46019 Summary Alarm Module example application. A SAM in each alarm shelf gives local control of alarm status indicators.

You can locate the external indicators (audible and visual) controlled by the SAM's relays on another floor (for example, the central office). The external indicators on another floor act independently of the alarm shelf processor. The alarm shelf processor reports to the central location computer, dumb terminal or alarm system master.

FIG. 2 - EXAMPLE APPLICATION, 46019 SAM



INSTALLATION

Installation consists of setting the straps and switches, wiring the pin connectors, installing the module in the equipment shelf, and checkout.

1. Set the straps and switches.

Refer to Fig. 3 and Table A. The SAM has a four mini-DIP switches that select the time-out interval. If you don't need that time-out feature, do not set any switches in the ON position.

Straps determine whether the relays follow the inputs or the latch.

FIG. 3 - SWITCH AND STRAP LOCATIONS, 46019 SAM

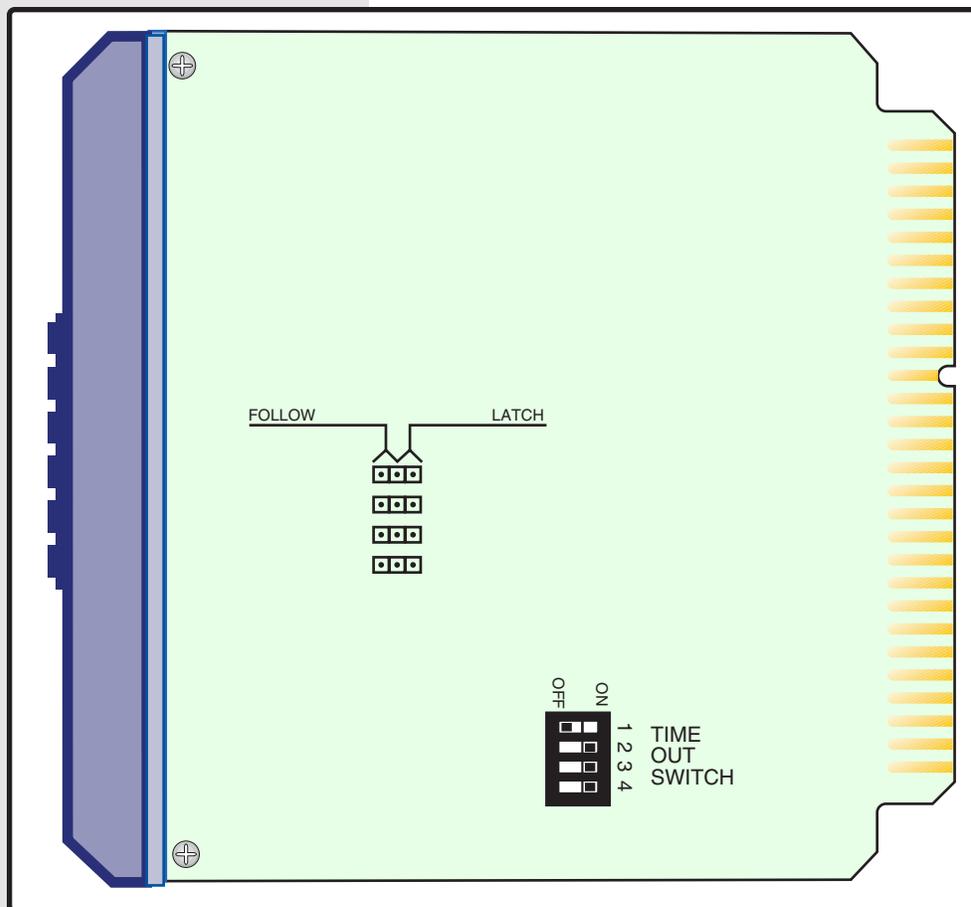


TABLE A - SWITCH SETTINGS, 46019 SAM

OPTION	DESCRIPTION
Switch 1 ON, all others OFF	Time Out After 0.5 Minutes
Switch 2 ON, all others OFF	Time Out After 1.0 Minutes
Switch 3 ON, all others OFF	Time Out After 4.0 Minutes
Switch 4 ON, all others OFF	Time Out After 8.0 Minutes
All Switches set OFF	No Time Out
NOTE: Set only one (1) switch ON at a time.	

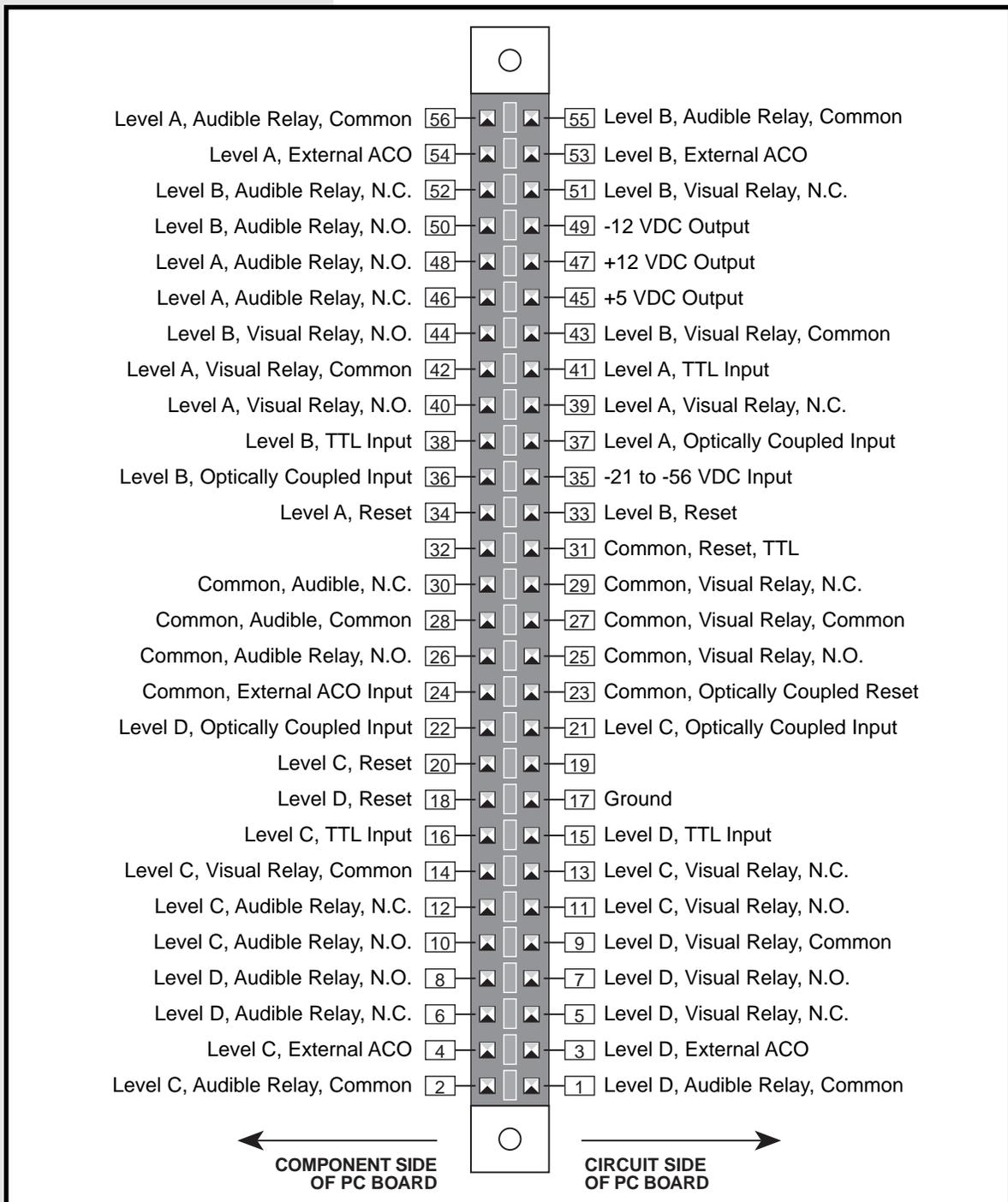
CONTINUED . . .

INSTALLATION

2. Wire the pin connectors.

Wire the pin connectors in the shelf or housing. Refer to Fig. 4.

FIG. 4 - PIN DESIGNATIONS, 46019 SAM



3. Install the module in the proper slot in the equipment shelf.

INSTALLATION

CHECKOUT

To check the operation of the 46019 SAM, monitor the unit in a system:

1. Apply an alarm at each input being used and observe the front panel for proper audible alarm, LED, and relay operation.
2. Acknowledge the alarms with the ACK ALL button. Interrupt the alarm signaling with the ACO switches.

OPERATION

For the most part, operation of the 46019 Summary Alarm Module consists of observing the LEDs or operating one of the front panel Alarm Cut-Off (ACO) switches.

- ◆ Interrupt alarm signaling by moving the appropriate front panel Alarm Cut-Off (ACO) switches. Each ACO has its own front panel LED which indicates when the ACO is active (that is, the alarm relays are disabled).
- ◆ Acknowledge the alarm with the ACK button. Acknowledge all alarms with the ACK ALL button.
- ◆ Front panel LEDs indicate the alarm level. Additional LEDs indicate whether the ACO switch is ON or OFF.

TECHNICAL SPECIFICATIONS

DESCRIPTION	VALUE
Input Power	
Voltage	-21 to -56 VDC
Current	
Idle (All relays and LEDs off)	55 mA (min.), 62 mA (max.)
Operating (All relays and LEDs on)	152 mA (min.), 172 mA (max.)
Alarm Circuit Inputs (A-D, O.C., TTL)	
Normal	+5 to +1.4 VDC
Alarm	0 to +1.4 VDC
Reset	
Normal	+5 to +1.4 VDC
Reset	0 to +1.4 VDC
External Acknowledge In	
Optically Coupled	
Normal	(-) Battery
Acknowledged	Ground
TTL	
Normal	+5 to +0.7 VDC
Acknowledged	0 to +0.7 VDC
Common External Acknowledge	
Input To Operate	0 to +1.4 VDC
Relay Contact Rating	
@ 30 VDC	2.0 Amps
@ 125 VAC	0.5 Amps
Physical Dimensions	1.4" x 6.0" x 5.6"
Weight	10.75 ounces
Operating Temperature Range	0° to 55° C.

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. **THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.**

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

1. **Switch settings**
2. **Signal levels**
3. **Software configuration**
4. **Connections between Dantel's equipment and your equipment.**

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL (1-800-432-6835)**.

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc. • 2991 North Argyle Avenue • Fresno, California 93727-1388



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