46062-02/03

GENERAL PURPOSE PROCESSOR

46062-03
GENERAL
PURPOSE
PROCESSOR

LOW BAT.

DANTEL

MASTER
DATA
PRINTER
RESET

Dantel
C11-46062-03 REV__

Table of Contents

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.

Y2K Compliant

About this Practice:

This practice has been reissued to:

- Document Y2K compliance.

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

Issue date: February 1999

UPDATED

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
C11-46062-02	General Purpose Processor; monitors up to 32,768 alarm points
C11-46062-03	General Purpose Processor; monitors up to 8,192 alarm points

GENERAL DESCRIPTION

The 46062 General Purpose Processor (GPP) provide a data base of all alarm points, operate up to 64 annunciator points and operate remote controls. You can send alarms from the GPP master port to an alarm system master. You can perform local monitoring by connecting the GPP printer port to a computer or dumb terminal.

There are two module options:

PART NUMBER	DESCRIPTION
C11-46062-02	Monitors up to 32,768 alarm points.
C11-46062-03	Monitors up to 8,192 alarm points.

The GPP has outputs that you can connect to external audible and visual equipment for reporting alarm levels. You can configure the GPP using the Printer Syntax commands in this manual or a separate program (such as Dantel's 46502 Status Monitor GPP Editor).

The module has three communications ports: the master, data, and printer ports. Each port is capable of asynchronous RS-232 communications. The master and data ports also can accept asynchronous RS-422/485 communications.

NOTE: *When referring to the port which interfaces the equipment being monitored, "data port" and "remote port" are used interchangeably and refer to the same port.*

The GPP is a plug-in printed circuit module that fits into any Dantel 400-type or similar equipment housing. The module operates on -21 to -56 VDC.

CIRCUIT DESCRIPTION

Fig. 1 shows the 46062 General Purpose Processor functional schematic.

Microprocessor and Associated Circuitry

The GPP utilizes a 16-bit parallel processor operating at 8.192 MHz.

Memory consists of the following:

♦ An EPROM (Erasable Programmable Read Only Memory) that contains the initial operating instructions for the micro-processor,

♦ A RAM that is used to store the operating software and the configuration database. The RAM has battery backup to protect against loss of data if power is removed from the unit.

A watchdog timer is provided to reset the module in the event of a Central Processor Unit (CPU) malfunction or voltage becomes out of tolerance.

Real-Time Clock

A real-time clock is used by the CPU to provide time and date stamping functions as alarm events occur. The real-time clock is set through the host computer's real-time clock during the database download process.

The real-time clock can be replaced with an external timer by placing the appropriate mini-jumper in the proper location. Refer to the Installation chapter for information on the strap locations.

Switches

There are three eight-lever DIP switches to set the default settings for the baud rates, parity parameters, protocol, and CTS/RTS options of the module's three ports.

Input/Output Ports

A DUSART (Dual Universal Synchronous/Asynchronous Receiver/Transmitter) provides communications for the master and the data ports. The ports support asynchronous RS-232 and RS-422/485 physical interfaces. The interface type is selected by the placement of mini-jumpers.

The printer port utilizes a UART (Universal Asynchronous Receiver/Transmitter) to provide an asynchronous RS-232 interface.

Both the DUSART and the UART operate at 3.6864 MHz.

Parallel Interface

There are two parallel interfaces that you can wire to external audible and visual equipment for alarm level reporting.

CIRCUIT DESCRIPTION

Front Panel Reset Switch

The front panel of the module has a recessed momentary push-button switch that is used to provide a hardware reset. If the button is pressed momentarily, the module restarts operation and reloads the default operating parameters established by the DIP switches.
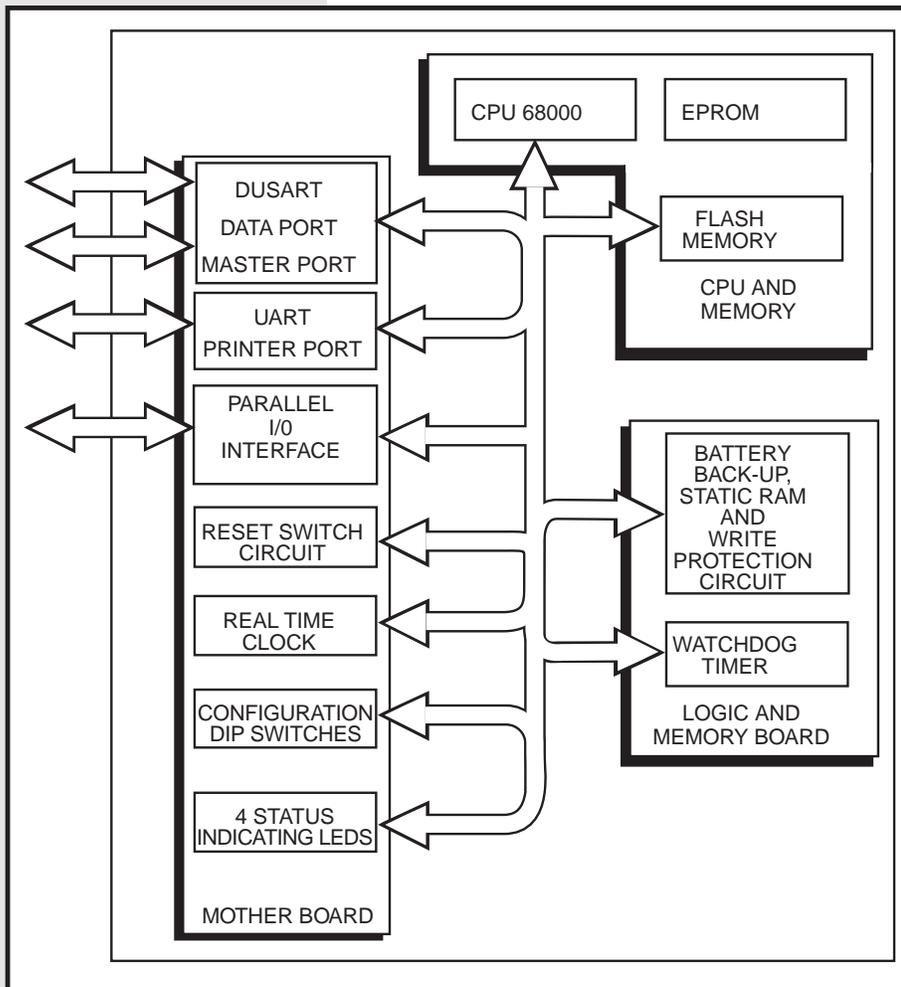
Front Panel LEDs

There are three green LEDs located on the front panel of the module that show if the ports are transmitting data.

There is one red LED in the front panel to indicate low voltage of the on-board battery.
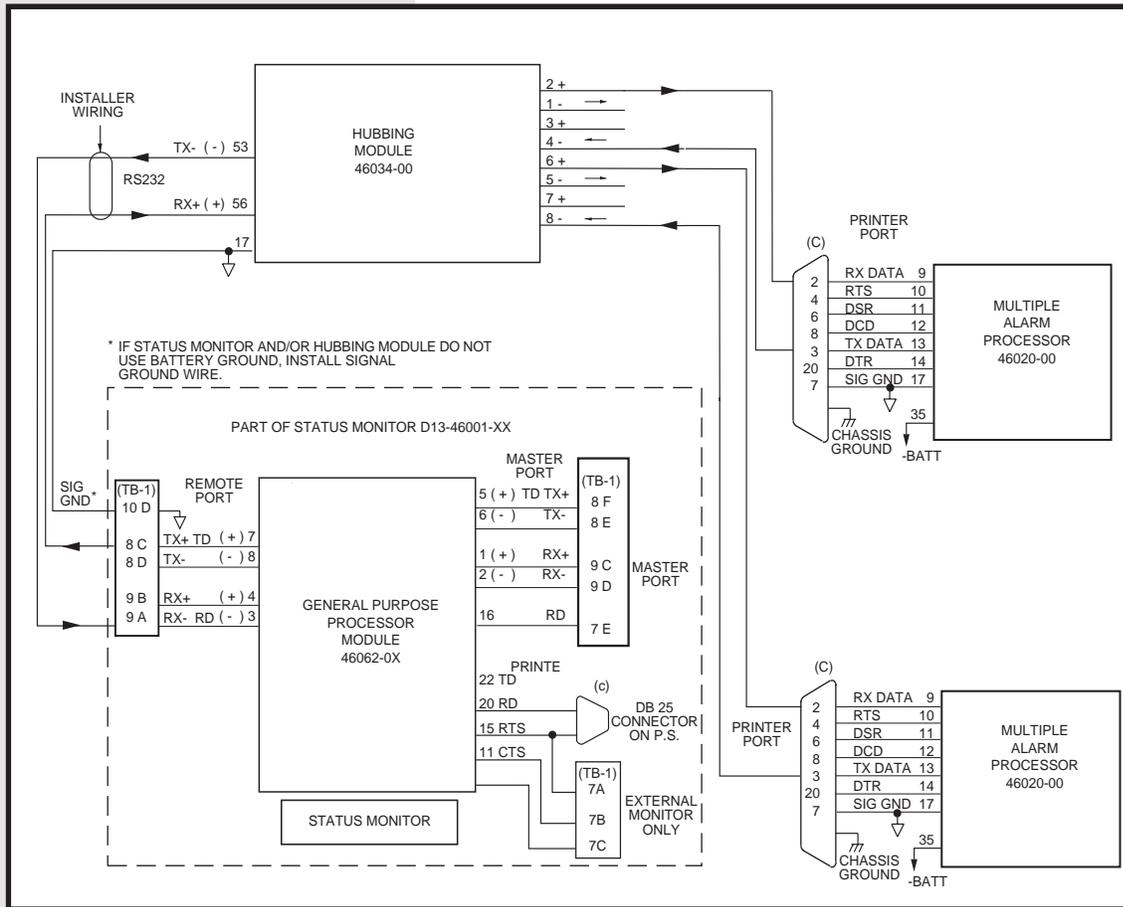
Power Supply

An on-board regulated power supply uses -21 to -56 VDC input power to provide regulated DC voltages to operate the module's circuitry.

FIG. 1 - FUNCTIONAL SCHEMATIC, 46062 GENERAL PURPOSE PROCESSOR

The 46062 General Purpose Processor (GPP) can be used in a number of different configurations.

♦ Fig. 2 shows a single GPP polling a single Multi Alarm Processor (MAP).

♦ Fig. 3 shows a single GPP polling multiple MAPs.

♦ Fig. 4 shows three GPPs in a master-slave configuration.

FIG. 2 - SINGLE GPP TO SINGLE MAP WIRING DIAGRAM

Fig. 3 - Single GPP To Multiple MAPs Wiring Diagram

FIG. 4 - MASTER/SLAVE GPP APPLICATION DRAWING

Each GPP's dumb terminal or computer displays the entire system's alarm data and may be used to issue any command

If GPP Address #1 fails, the system continues operation
GPP Address #2 becomes the new master automatically

NOTE: A Personal Computer allows uploading/downloading of the System Configuration Database. A Dumb Terminal does not.
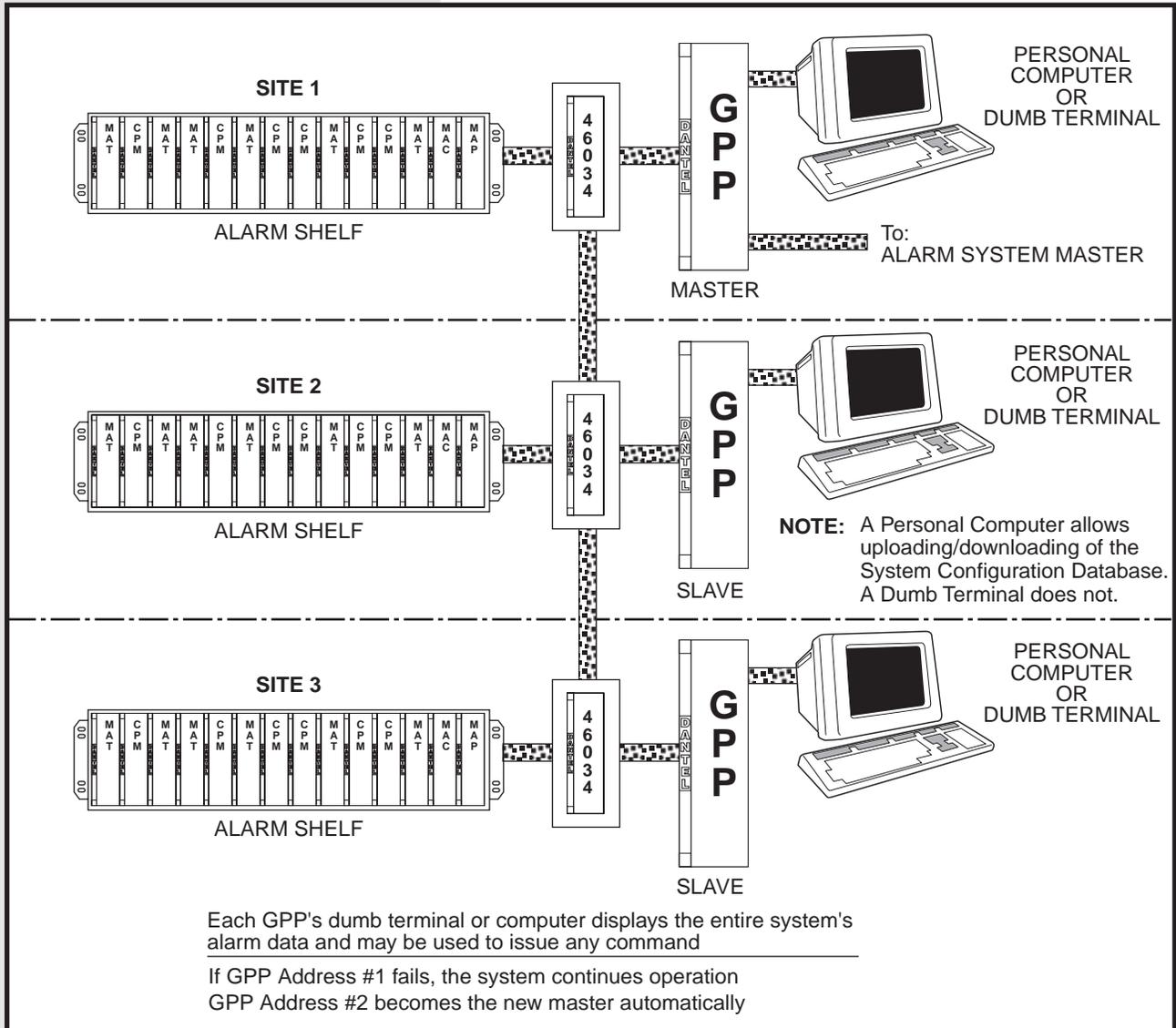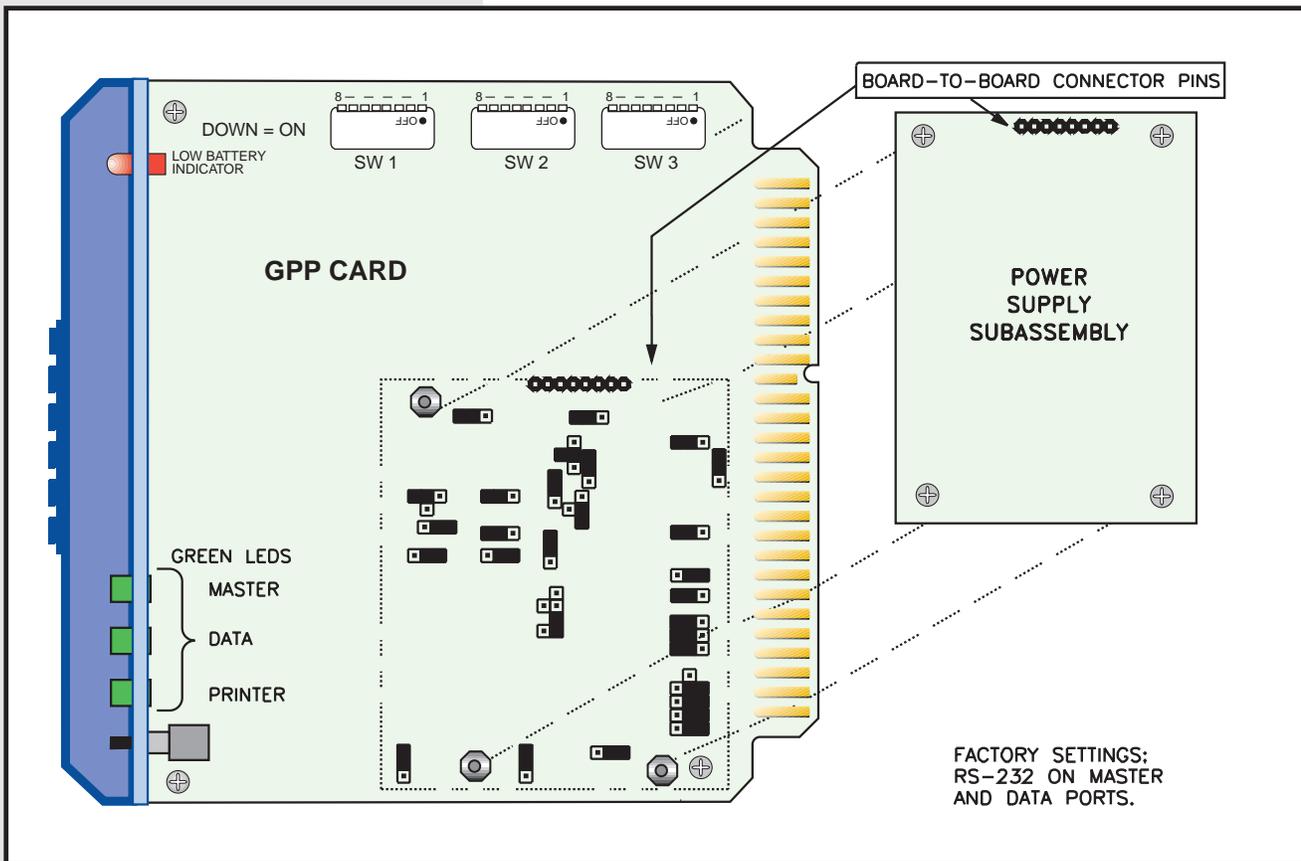
INSTALLATION

Installation consists of setting the switches and straps, wiring the connector, installing the module in the shelf, and downloading the configuration database.

SWITCH SETTINGS

Set the switches. Refer to Figs. 5-9.

FIG. 5 - PC BOARD SWITCH AND STRAP LOCATIONS

INSTALLATION

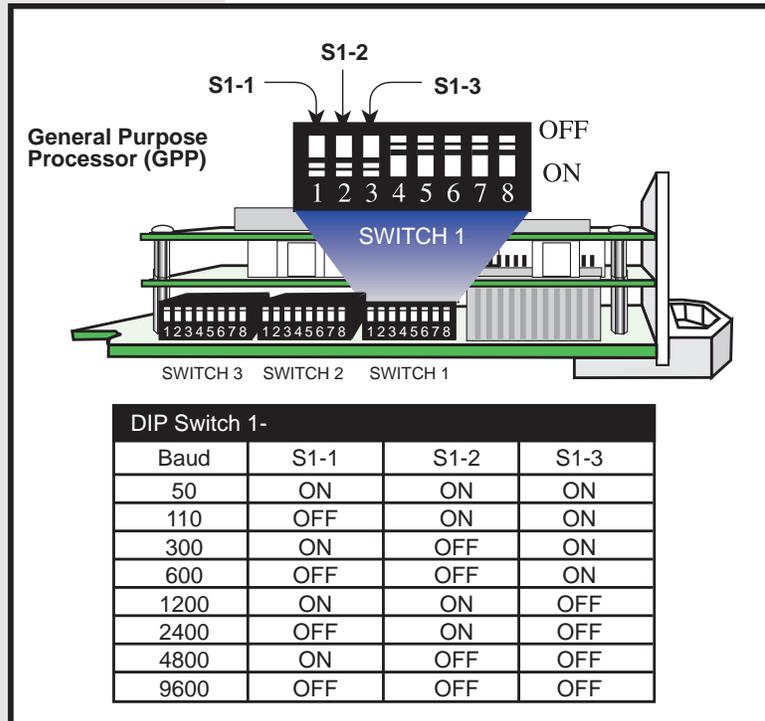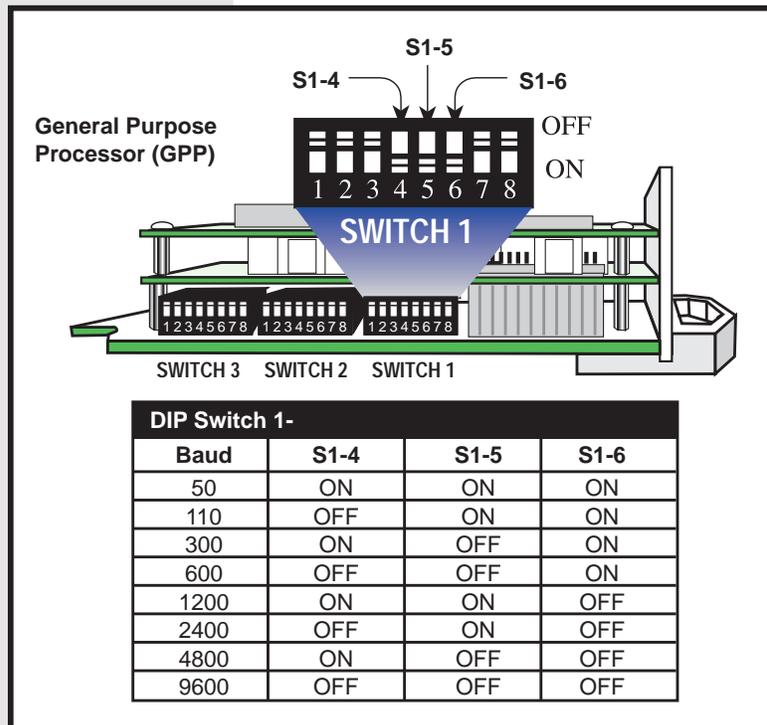**FIG. 6 - PRINTER PORT DATA RATE SWITCH SETTINGS**

S1-1 S1-2 S1-3

General Purpose Processor (GPP)

OFF ON

1 2 3 4 5 6 7 8

SWITCH 1

12345678 12345678 12345678

SWITCH 3   SWITCH 2   SWITCH 1

DIP Switch 1-			
Baud	S1-1	S1-2	S1-3
50	ON	ON	ON
110	OFF	ON	ON
300	ON	OFF	ON
600	OFF	OFF	ON
1200	ON	ON	OFF
2400	OFF	ON	OFF
4800	ON	OFF	OFF
9600	OFF	OFF	OFF

FIG. 7 - MASTER PORT DATA RATE SWITCH SETTINGS

S1-4 S1-5 S1-6

General Purpose Processor (GPP)

OFF ON

1 2 3 4 5 6 7 8

SWITCH 1

12345678 12345678 12345678

SWITCH 3   SWITCH 2   SWITCH 1

DIP Switch 1-			
Baud	**S1-4**	**S1-5**	**S1-6**
50	ON	ON	ON
110	OFF	ON	ON
300	ON	OFF	ON
600	OFF	OFF	ON
1200	ON	ON	OFF
2400	OFF	ON	OFF
4800	ON	OFF	OFF
9600	OFF	OFF	OFF

FIG. 8 - ALARM MASKING SWITCH SETTINGS

General Purpose Processor (GPP)

SWITCH 3   SWITCH 2   SWITCH 1

S1-8 OFF - Global alarms can be masked
S1-8 ON - Global alarms can not be masked
S1-7 OFF - Local alarms can be masked
S1-7 ON - Local alarms can not be masked

NOTE: This firmware incorporates an alarm masking feature which, when activated, will filter (block) all LOCAL alarms, or all GLOBAL alarms from the display. Switches S1-7 and S1-8 enable this feature; the DISPLAY command determines if LOCAL or GLOBAL alarms will be masked.

Switch 3 is not used and each lever should be left in the OFF position.

FIG. 9 - DATA PORT ADDRESS (GPP) SWITCH SETTINGS

S2-1 through S2-8

SWITCH 3   SWITCH 2   SWITCH 1
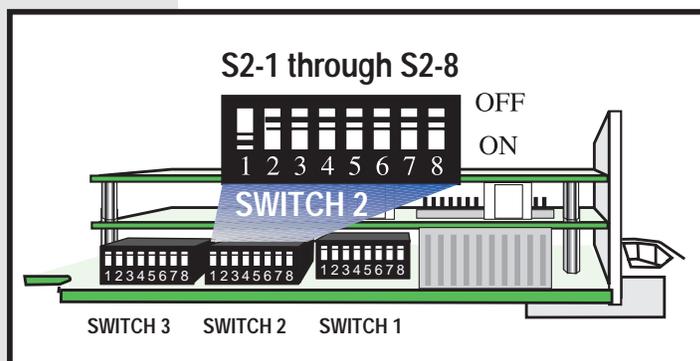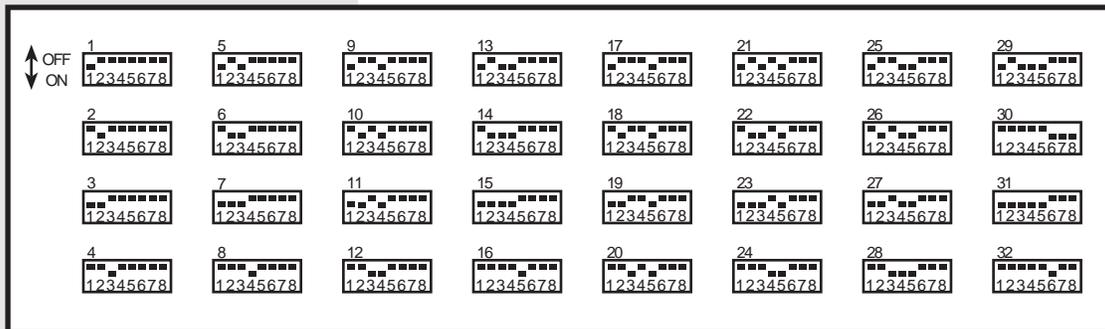
STRAP SETTINGS

Set the straps as required for the specific application.

There are no strap settings for the printer port; RS-232 is the only interface available on this port.

The straps for the master and data ports are located beneath the power supply subassembly; refer to Fig. 5 for the location of the power supply. To access the straps:

- ♦ Remove the four screws securing the subassembly.

- ♦ Pull the subassembly straight up, exercising caution not to bend the subassembly connector pins.

Refer to Figs. 10 and 11 for the specific strap locations for RS-232 and RS-422 asynchronous communications on the master and data ports.

NOTE: *Many straps in Fig. 11 are reserved for future use. For additional information regarding strapping options, refer to Tables A and B.*

Asynchronous operation of the RS-232 interface requires only three lines: the transmit and the receive lines and signal ground. Handshaking lines are also available.

Asynchronous operation of the RS-422 interface requires four lines: transmit positive and negative polarity lines and receive positive and negative polarity lines.

The printer port always operates in asychronous RS-232 mode and requires no straps. Contact Dantel's Field Service department for more information about the following applications:

- ♦ Asynchronous RS-232 operation requiring handshaking

- ♦ Synchronous RS-232 or RS-422 operation

- ♦ Applications not shown in Figs. 10 and 11.

Straps X1 and X2 allow electrical disconnection of the backup battery for storage or shipment. Set strap X1 for normal operation. Set strap X2 for shipment or storage. The GPP ships with strap X2 set. Reset the strap to X1 during installation.

NOTE: *The on-board GPP battery is designed to retain the database configuration during momentary power outages only. It is not intended for long-term storage of databases and is not rechargeable. The battery will begin to discharge when two conditions are met: (1) The X1 strap is in, and (2) power has been removed from the module. When the GPP is not in use, place this strap in the X2 position.*
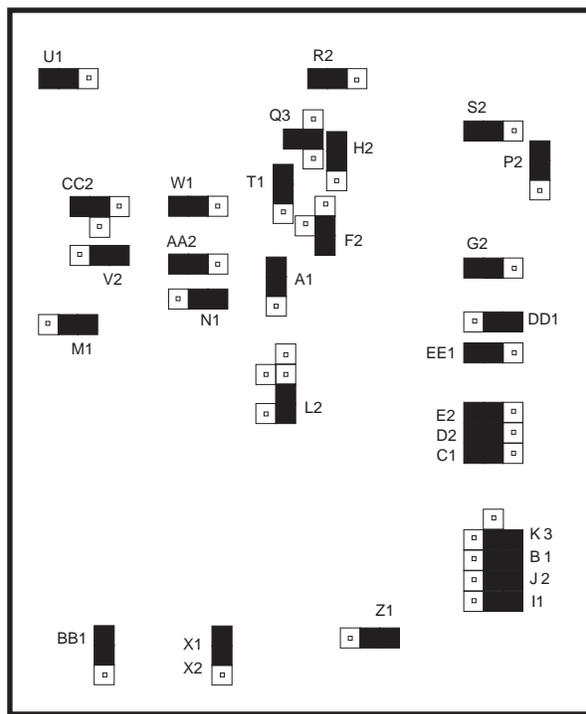
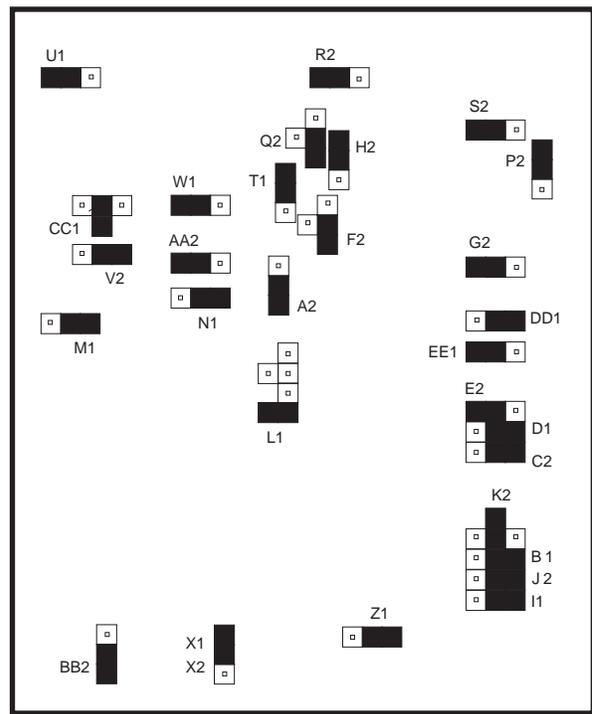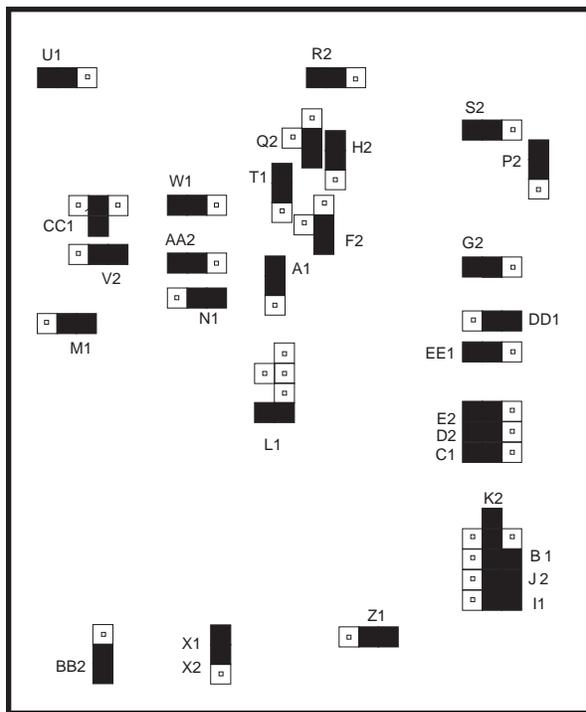**Fig. 10 - Strapping Diagram**
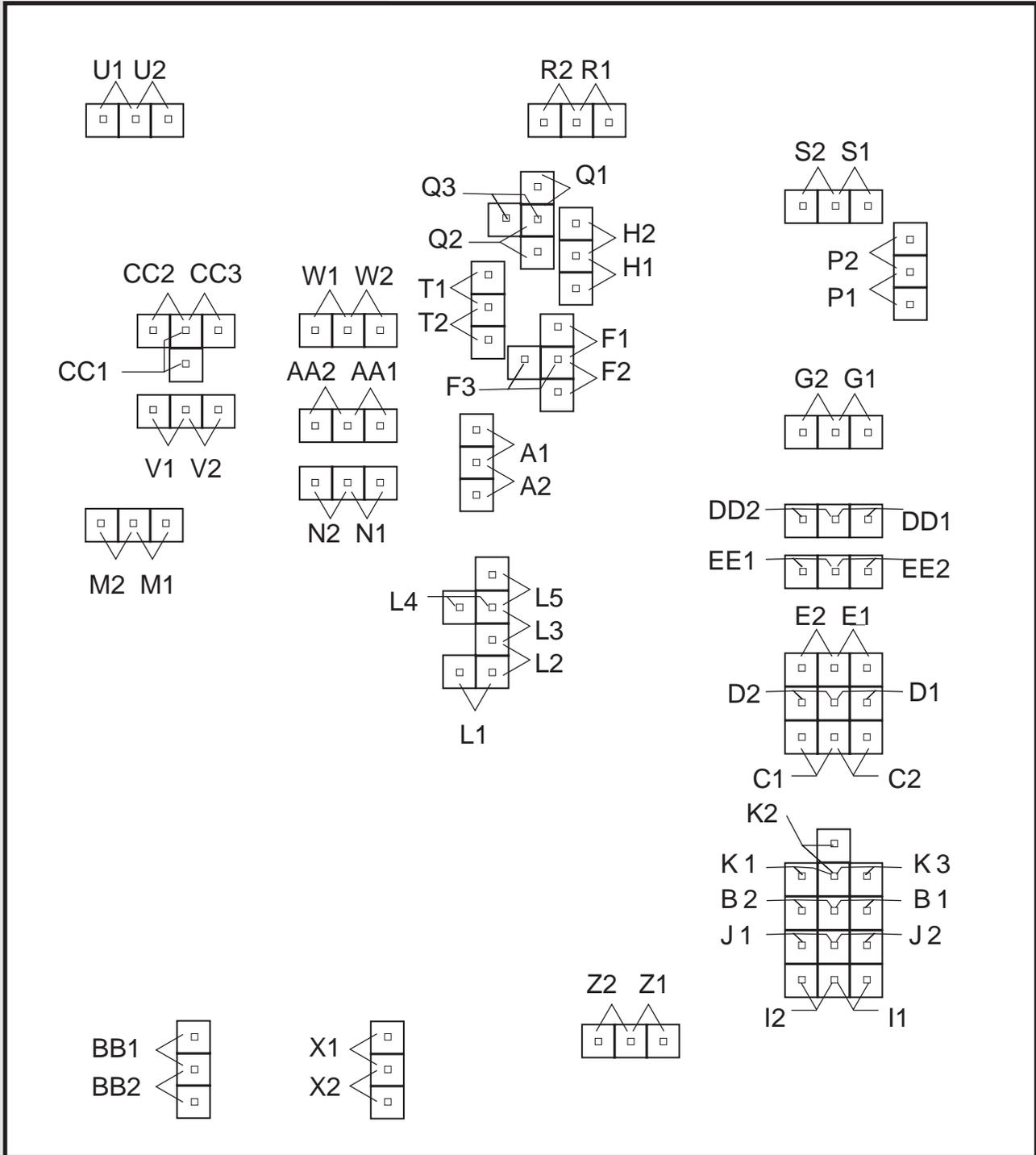
INSTALLATION

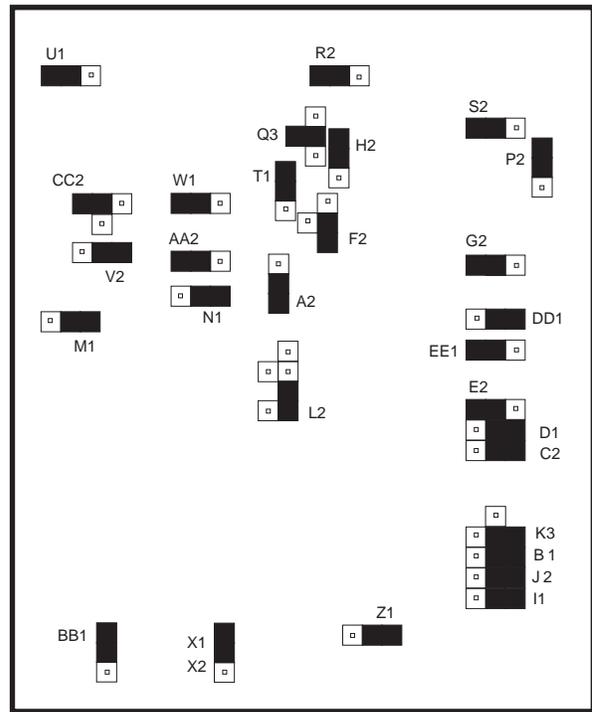FIG. 11 - STRAPPING DIAGRAM, MASTER AND DATA PORTS

Master Port - RS-232 Asynchronous
Data Port - RS-232 Asynchronous

Master Port - RS-422 Asynchronous
Data Port - RS-422 Asynchronous

Master Port - RS-422 Asynchronous
Master Port - RS-232 Asynchronous

Master Port - RS-232 Asynchronous
Data Port - RS-422 Asynchronous

INSTALLATION

MASTER PORT			
INTERFACE	**DESCRIPTION**	**STRAPPING**	**PIN USED**
RS-232	TD (Transmit Data)	K3	5
	RD (Receive Data)	DD1, CC2	16
	RTS (Request To Send)	L2	6
	CTS (Clear To Send)	N1, EE1	10
RS-422	TX+	K2, L1, T1	5
	TX-	K2, L1, T1	6
	RX+	J2, CC1	1
	RX-	J2, CC1	2
	RX terminated	I1	
	RX not terminated	I2	
	DCD (Data Carrier Detect) always ON	N2	not used
	CTS (Clear To Send) always ON	M2	not used
RS-485	TX+	K2, L1, T2	5
	TX-	K2, L1, T2	6
	RX+	J2, CC1	1
	RX-	J2, CC1	2
	RX terminated	I1	
	RX not terminated	I2	
	DCD (Data Carrier Detect) always ON	N2	not used
	CTS (Clear To Send) always ON	M2	not used
TTL	TXD (Transmit Data)	K1	5
	RXD (Receive Data)	J1, CC3	2
	RTS (Request To Send)	L4	29
	DTR (Data Transmit Ready)	L5	29
	DCD (Data Carrier Detect)	N2, EE2	10
	CTS (Clear To Send)	M2, DD2	16
DATA PORT			
INTERFACE	**DESCRIPTION**	**STRAPPING**	**PIN USED**
RS-232	TD (Transmit Data)	C1	7
	RD (Receive Data)	A1	3
	RTS (Request To Send)	none	53
	CTS (Clear To Send)	none	14
	DCD (Data Carrier Detect)	none	12
RS-422	TX+	C2, D1, Z1	7
	TX-	C2, D1, Z1	8
	RX+	A2	4
	RX-	A2	3
	RX terminated	B1	
	RX not terminated	B2	
RS-485	TX+	C2, D1, Z2	7
	TX-	C2, D1, Z2	8
	RX+	A2	4
	RX-	A2	3
	RX terminated *	B1	
	RX not terminated *	B2	
* FOR MULTIPLE RS-485 GPPS, TERMINATE ONE DATA PORT ONLY (B1). STRAP ALL OTHERS B2.			

INSTALLATION

	ADDITIONAL STRAPPING		
	DESCRIPTION	STRAPPING	PIN USED
	Timer Output Active	U1	
	Timer Output Inactive	U2	
	Interrupt Request Line Active	V1	
	Interrupt Request Line Inactive	V2	
	External Timer	W2	
	Real-time Clock	W1	
	Battery - Operating Condition	X1	
	Battery - Storage Condition	X2	
IMPORTANT: The 46062 GPP is shipped from the factory with the battery strapped in the storage position (X2). Prior to downloading any data to the module, This strap must be placed in the X1 position to provide battery back-up for the module.			
NOTE: RTS AND DTR ARE OUTPUTS. DCD AND CTS ARE INPUTS.			

TABLE B - STRAP DEFINITIONS

STRAP	PORT	INTERFACE	DESCRIPTION
A1	Data	RS-232	RD
A2	Data	RS-422	RXD
B1**	Data	RS-422/485	RXD terminated
B2**	Data	RS-422/485	RXD not terminated
C1	Data	RS-232	TD
C2	Data	RS-422/485	TXD
D1	Data	RS-422/485	TXD
D2	Data	RS-232	RTS
E1*	Data	RS-422/485	RXC terminated
E2*	Data	RS-422/485	RXC not terminated
F1*	Data	RS-422	TXC
F2*	Data	RS-485	TXC
F3*	Data	RS-232	TXC
G1*	Data	RS-422/485	TXC DUSART Out and output loop RX clock
G2*	Data	RS-422/485	TXC disabled
H1*	Data	RS-422/485	TXC terminated
H2*	Data	RS-422/485	TXC
I1	Master	RS-422/485	RXD terminated
I2	Master	RS-422/485	RXD not terminated
J1	Master	TTL	RXD
J2	Master	RS-422/485	RXD
K1	Master	TTL	TXD
K2	Master	RS-422/485	TXD
K3	Master	RS-232	TXD
L1	Master	RS-422/485	TXD
L2	Master	RS-232	RTS
L3	Master	RS-232	RTS
L4	Master	TTL	RTS
L5	Master	TTL	DTR

INSTALLATION

STRAP	PORT	INTERFACE	DESCRIPTION
M1	Master	RS-232	CTS
M2	Master/Data	TTL	CTS
N1	Master	RS-232	DCD
N2	Master	TTL	DCD
P1*	Master	RS-422/485	RXC terminated
P2*	Master	RS-422/485	RXC not terminated
Q1*	Master	RS-422/485	RXC
Q2*	Master	RS-422/485	TXC
Q3*	Master	RS-232	TXC
R1*	Master	RS-422/485	TXC terminated
R2*	Master	RS-422/485	TXC not terminated
S1*	Master	RS-422/485	RX clock input; DUSART output
S2*	Master	RS-422/485	Enable/Disable
T1	Master	RS-422	TXD
T2	Master	RS-485	TXD
U1	-	-	Timer Output Active
U2	-	-	Timer Output Inactive
V1	-	-	Interrupt Request Line Active
V2	-	-	Interrupt Request Line Inactive
W1	-	-	Real-time Clock
W2	-	-	External Timer
X1	-	-	Battery - Operating Condition
X2	-	-	Battery - Storage Condition
Z1	Data	RS-422	TXD
		RS-232	RTS
Z2	Data	RS-485	TXD
AA1*	Data	RS-232	RXC
AA2*	Data	RS-422	RXC
BB1*	Master	RS-232	RX clock
BB2*	Master	RS-422/485	RX clock input
CC1	Master	RS-422/485	RXD
CC2	Master	RS-232	RD
CC3	Master	TTL	RXD
DD1	Master	RS-232	CTS/RD
DD2	Master/Data	TTL	CTS
EE1	Master	RS-232	DCD
EE2	Master	TTL	DCD

 * Reserved for future use.

** When using RS-485, the data port strap must be terminated on one module only. All other modules must have data port unterminated.
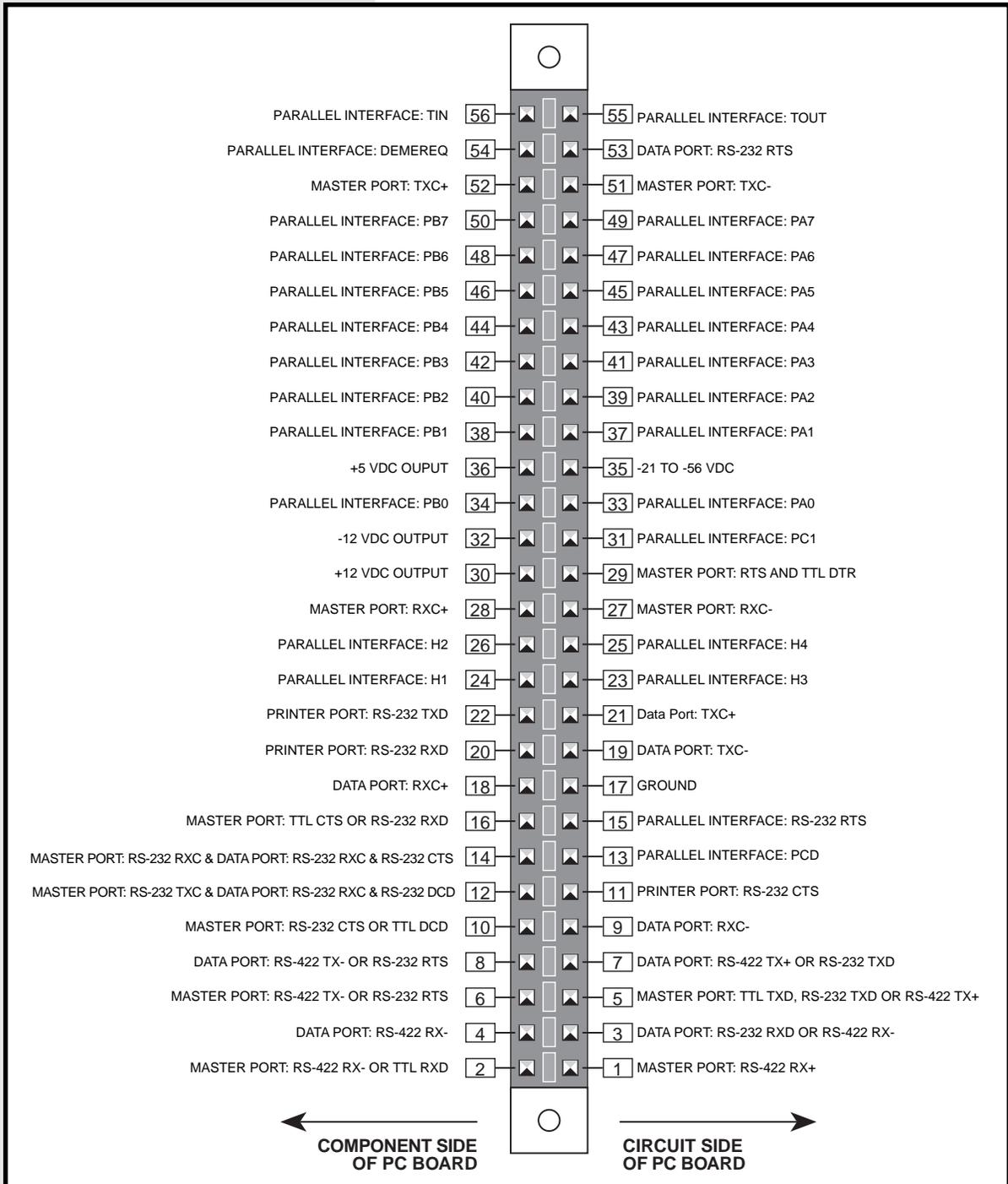
INSTALLATION

WIRING

Wiring consists of wiring the 56-pin edge connector and wiring the GPP to external equipment.

1. Wire the connector

If needed, refer to Fig. 12 for 46062 pin wiring assignments.

FIG. 12 - PIN DESIGNATIONS

Component Side	Pin	Pin	Circuit Side
PARALLEL INTERFACE: TIN	56	55	PARALLEL INTERFACE: TOUT
PARALLEL INTERFACE: DEMEREQ	54	53	DATA PORT: RS-232 RTS
MASTER PORT: TXC+	52	51	MASTER PORT: TXC-
PARALLEL INTERFACE: PB7	50	49	PARALLEL INTERFACE: PA7
PARALLEL INTERFACE: PB6	48	47	PARALLEL INTERFACE: PA6
PARALLEL INTERFACE: PB5	46	45	PARALLEL INTERFACE: PA5
PARALLEL INTERFACE: PB4	44	43	PARALLEL INTERFACE: PA4
PARALLEL INTERFACE: PB3	42	41	PARALLEL INTERFACE: PA3
PARALLEL INTERFACE: PB2	40	39	PARALLEL INTERFACE: PA2
PARALLEL INTERFACE: PB1	38	37	PARALLEL INTERFACE: PA1
+5 VDC OUPUT	36	35	-21 TO -56 VDC
PARALLEL INTERFACE: PB0	34	33	PARALLEL INTERFACE: PA0
-12 VDC OUTPUT	32	31	PARALLEL INTERFACE: PC1
+12 VDC OUTPUT	30	29	MASTER PORT: RTS AND TTL DTR
MASTER PORT: RXC+	28	27	MASTER PORT: RXC-
PARALLEL INTERFACE: H2	26	25	PARALLEL INTERFACE: H4
PARALLEL INTERFACE: H1	24	23	PARALLEL INTERFACE: H3
PRINTER PORT: RS-232 TXD	22	21	Data Port: TXC+
PRINTER PORT: RS-232 RXD	20	19	DATA PORT: TXC-
DATA PORT: RXC+	18	17	GROUND
MASTER PORT: TTL CTS OR RS-232 RXD	16	15	PARALLEL INTERFACE: RS-232 RTS
MASTER PORT: RS-232 RXC & DATA PORT: RS-232 RXC & RS-232 CTS	14	13	PARALLEL INTERFACE: PCD
MASTER PORT: RS-232 TXC & DATA PORT: RS-232 RXC & RS-232 DCD	12	11	PRINTER PORT: RS-232 CTS
MASTER PORT: RS-232 CTS OR TTL DCD	10	9	DATA PORT: RXC-
DATA PORT: RS-422 TX- OR RS-232 RTS	8	7	DATA PORT: RS-422 TX+ OR RS-232 TXD
MASTER PORT: RS-422 TX- OR RS-232 RTS	6	5	MASTER PORT: TTL TXD, RS-232 TXD OR RS-422 TX+
DATA PORT: RS-422 RX-	4	3	DATA PORT: RS-232 RXD OR RS-422 RX-
MASTER PORT: RS-422 RX- OR TTL RXD	2	1	MASTER PORT: RS-422 RX+

← COMPONENT SIDE OF PC BOARD   CIRCUIT SIDE OF PC BOARD →

2. Wire the GPP to external equipment.

Fig. 2, in *Applications* section, shows a single GPP connected to a 46020 Multiple Alarm Processor in an alarm shelf.

Fig. 3, in *Applications* section, shows a single GPP connected to multiple 46020 Multiple Alarm Processors in an alarm shelf.

Fig. 4, in *Applications* section, shows multiple GPPs connected together in a master-slave arrangement:

- ♦ You can locate each shelf in a different site.

- ♦ All GPPs connect to the same data bus via 46034 Hubbing Modules.

- ♦ Each GPP reports alarm data simultaneously for the entire system.

- ♦ The GPP with the lowest address is the "master" and all other GPPs are "slaves." Only the master can communication directly with the shelves.

- ♦ If the master fails, the slave with the next highest address becomes the new master. The failed master regains control when it returns to service.

The data port wires to alarm equipment for monitoring alarm points and operates annunciator points and remote controls. This port also connects to any slave GPPs being used in the system.

The printer port wires to a dumb terminal or computer. If the computer includes Dantel's 46502 Status Monitor GPP Editor, you can configure the GPP with the software.

The master port wires to an alarm system master.

Parallel ports A and B are available to connect external TTL audible and visual equipment for alarm level reporting. Contact Dantel Customer Support.

3. Connect power to the shelf.

Refer to the Technical Specifications section for power requirements. When fusing the shelf, consider the power requirements of all the modules in that shelf.

MODULE INSTALLATION

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

NOTE: *When using the RS-232 interface on the master port, the GPP requires RTS (pin 6) and CTS (pin 10) handshaking. If pins 6 and 10 are not going to be wired to your equipment, then pin 6 must be wired to pin 10 on the GPP edge connector (refer to Fig. 4) to enable the master port to operate.*
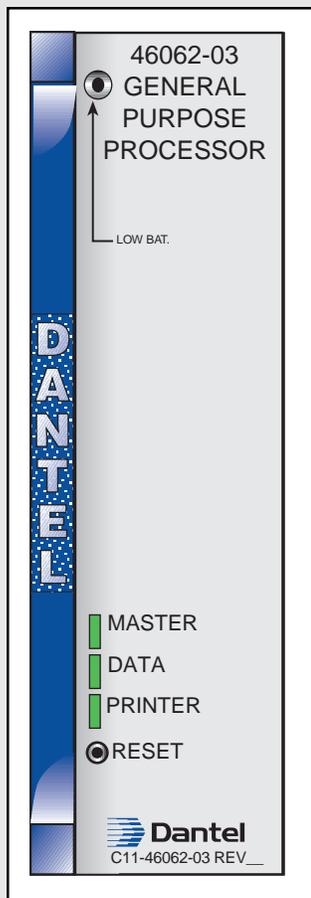
OPERATION

There are no specific operating instructions for the 46062 GPP. Operation begins when power is applied to the unit and is initially based on the switch settings. Once the database configuration has been downloaded to the module, the operating software uses the database configuration to control the module's operation.

The front panel of the module has three green LEDs labeled MASTER, DATA, and PRINTER. Each LED flashes when the corresponding port is transmitting data.

There is a red LED which flashes if the on-board back-up battery drops in voltage.

The recessed momentary push-button RESET switch on the front panel restarts module operation and returns the module to its default switch settings.

LOW BATTERY INDICATION

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46062-03
GENERAL
PURPOSE
PROCESSOR

─ LOW BAT.

D
A
N
T
E
L

MASTER
DATA
PRINTER
⊙ RESET

Dantel
C11-46062-03 REV__
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LED Indications

The General Purpose Processor (GPP) is equipped with a battery back-up. A low battery can ultimately result in the loss of data. When the GPP detects a low battery condition the LOW BAT LED on the front panel of the GPP will begin flashing. This LED will turn on before the voltage of the battery drops below the point at which memory loss will occur. It will not stop until the battery or the GPP is replaced.

A 46062-03 GPP uses display 67, points 33-64 to report low battery conditions on GPP addresses 1-32. The 46062-02 uses points 33-64 of display 73 for the same purpose. Use the SET command (refer to the *PRINTER SYNTAX* section of this manual) to assign levels to each of the points being used.

Normally, the GPP is used as part of the 46001 Status Monitor and each point can be configured to report as one of the following:

- ♦ GLOBAL CRITICAL
- ♦ GLOBAL MAJOR
- ♦ GLOBAL MINOR
- ♦ GLOBAL STATUS
- ♦ LOCAL CRITICAL
- ♦ LOCAL MAJOR
- ♦ LOCAL MINOR
- ♦ LOCAL STATUS

A low battery reported by that GPP causes the assigned LED on the front panel of the Status Monitor to flash. This flashing has priority over the normal reporting of alarms which cause the LEDs to come on solid.

OPERATION

GPP	TYPICAL MESSAGE
46062-03	1 67 57 G AF CAUTION! BACKUP DATA, BAT LOW
46062-02	1 73 64 G AF CAUTION! BACKUP DATA, BAT LOW

The examples shown above are the default messages. User-defined messages are created using the DESCRIBE command (refer to the ***PRINTER SYNTAX*** section of this manual). The message is changeable within the parameters of the DESCRIBE command.

In the examples above,

♦ 1 67 57 G AF is a low battery condition on the GPP with an address of 25.

♦ 1 73 64 G AF is a low battery condition on the GPP with an address of 32.

If a master Status Monitor battery is low, the alarm message will be sent to its master port and printer port, the associated Status Monitor LED will flash, and the front panel LED on its GPP will blink.

If a slave Status Monitor battery is low, its alarm message will be sent to its own master and printer port, the associated Status Monitor LEDs will flash, and the front panel LED on its GPP will blink. The remote will continue to listen to the master Status Monitor but will not respond when it is polled by the master Status Monitor. Because there is no response to the poll, the master Status Monitor will register it as a slave failure (using points 1-32 of display 67 or 73).

PRINTER SYNTAX

Here are the commands for GPP printer port operation. This syntax establishes the coding for the printer port to inter-face to a standard ASCII (VT-100) terminal or a personal computer with terminal emulation software. The printer syntax provides access to the database and remote equipment. No polling occurs unless you configure one or more remote(s) and display(s) for polling and you turn polling on.

GETTING STARTED

The terminal must be set for the proper data rate, eight data bits, one stop bit, and no parity.

♦ Make these settings before connecting the terminal to the GPP.

CONTINUED . . .

♦ If the system is operating properly, a prompt (OK) appears on the screen. The GPP is ready to accept command inputs.

♦ If the terminal and GPP do not communicate, remove power from the GPP. Then check the settings at the terminal and also at the GPP.

Type UNLOCK and press Enter.

This command unlocks the GPP so you can enter most of the other commands. If there is a password in the GPP, you will have to type the password in order to unlock the GPP.

NOTE: *See the Password command in the* Syntax Commands *section for instructions on setting up a password.*

ENTERING COMMANDS

After each command you type at the terminal, press Enter to execute the command.

Some standard ASCII terminals (or computers operating as terminals) have function keys you can program to do frequently used keystroke sequences in a single keystroke. Refer to your terminal's user manual for instructions on how to program the function keys.

FREQUENTLY USED COMMANDS

Most Printer Syntax commands are seldom used. Frequently used commands are listed below:

UNLOCK

ACKNOWLEDGE

SYSTEM

LIST

CALL

PAGE

DEVICE STATUS

EDIT

Several editing features are available. The term Ctrl below refers to the Control or Ctrl key on your keyboard.

Backspace

Press the Backspace key or hold down the Ctrl key and press the H key.

PRINTER SYNTAX

Recall Previous Line

To retype the last line you typed when an error message is returned or to edit a command, hold down the Ctrl key and press the K key.

Recall Current Line

When a system status message interrupts you, hold down the Ctrl key and press the R key to retype contents of the line you were typing.

Pause Output

Interrupt data flow from the processor by holding down the Ctrl key and pressing the S key. Restart the system by holding down the Ctrl key and pressing the S key a second time.

Halt Output

Hold down the Ctrl key and press the D key.

Re-Execute Last Command

Hold down the Ctrl key and press the X key.

ERROR MESSAGES

Two error messages may appear on the terminal screen:

MESSAGE	MEANING	ACTION
COMMAND ERROR	Command not understood	Enter the command correctly
SYNTAX ERROR	Entry doesn't follow the rules of syntax	Enter the command correctly

CONFIGURATION

Before you can use the GPP in any application, you must configure the GPP for the system the GPP operates in. Configure the system through keyboard entry or by downloading the database from an IBM-compatible computer through the master or printer port.

Configure the system as follows:

1. Generate a polling list.

The polling list informs the GPP about:

♦ Which MAPs should be interrogated.

♦ Which displays contain the necessary alarm data.

Devices poll in the order that they appear on the polling list.

2. Define alarm points and enter alarm text descriptions.

There are eight ways to define an alarm.

Alarms divide into two groups: LOCAL and GLOBAL. Alarms in each of these two groups are divided into four levels: A, B, C and D. Every alarm in the database is a LOCAL or GLOBAL alarm without an alarm level. The default definition is a LOCAL level D alarm.

The Printer Syntax recognizes alarm levels A, B, C and D as CRITICAL, MAJOR, MINOR and STATUS alarms.

If you use software for configuring the system, refer to the Dantel 46502 Status Monitor GPP Editor documentation.

SAMPLE GPP CONFIGURATION FILE

Unlock
Pg Off
Unlock
Pg Off

This series of commands unlocks the GPP which allows configuration changes and turns the paging feature off. If PAGE is not turned off, the screen displays only one page of data and then ignores all keyboard commands until you press the Enter key.

Reset All

Erases the entire configuration file. You should use this command only when you replace the entire file.

NOTE: *If you entered RESET ALL, repeat step 1.*

Con ID 1 Disp 8-10

Tells the GPP to interrogate (poll) MAP 1 displays 8, 9 and 10. There are 192 alarm points in these displays.

Set ID 1 Disp 8 Pnt 1 Global Pnt

Defines the alarm at point 1 as a global and critical (level A) alarm.

Set ID 1 Disp 8 Pnt 2 Pnt

Defines the alarm at point 2 as being a local and critical (level A) alarm. The GPP assumes that any alarm not defined as global is local, so there is no need to define point 2 as a local alarm.

Set ID 1 Disp 8 Pnt 3 Global Major

Defines the alarm at point 3 as a global and major (level B) alarm.

Set ID 1 Disp 8 Pnt 4 Minor

Defines the alarm at point 4 as a local and minor (level C) alarm.

Set ID 1 Disp 8 Pnt 5 Global

Defines the alarm at point 5 as a global alarm. The GPP assumes that any alarm not defined as level A, B or C is a level D alarm, so there is no need to define point 5 as a level D alarm.

Desc ID 1 Disp 8 Pnt 1

    15:36:09 11-14-96 ENTER TEXT...

Lets you enter a text message describing the alarm point. Do not exceed 32 characters.

Desc ID 1 Disp 8 Pnt 2

    15:36:09 11-14-96 ENTER TEXT...

Lets you enter a text message describing the alarm point. Do not exceed 32 characters.

Desc ID 1 Disp 8 Pnt 3

    15:36:09 11-14-96 ENTER TEXT...

Lets you enter a text message describing the alarm point. Do not exceed 32 characters.

Desc ID 1 Disp 8 Pnt 4

    15:36:09 11-14-96 ENTER TEXT...

Lets you enter a text message describing the alarm point. Do not exceed 32 characters.

This sample defined four of the 192 points in the three interrogated (polled) displays. The other 188 points default to local status (level D) alarms.

Sys

The system is configured. The GPP automatically polls MAP 1, displays 8, 9 and 10. The GPP displays any of the 192 alarms within displays that experience a change of state. The SYS command displays any active alarms.

PRINTER SYNTAX

Whenever there is an alarm or device failure, the GPP issues a report. A report example is shown below.

```
1  5   3  L  AF (alarm point description)
1  5   4  L  C  TOWER FOUR LIGHT OUT
1 66  19  G  AF COMM FAILURE TOWER 19
```

This is a typical display of set alarm points.

♦ The first column is the MAP address.

♦ The second column is the display number.

♦ The third column is the alarm point number.

♦ The fourth column indicates a local or global alarm.

♦ The fifth column gives the type of alarm (A is critical, B is major, C is minor, and D is status). If you do not acknowledge the alarm, the letter F follows the type of alarm. When you acknowledge an alarm point, the letter F will be stripped off, leaving only the level indicator A, B, C, or D.

♦ If you entered a point description, the description follows the five columns.

The first line reads as MAP 1, display 5, alarm point 3, which is a critical alarm (level A) that has not been acknowledged.

The second line reads as MAP 1, display 5, alarm point 4, which is a routine (level C) alarm reporting the loss of a light on tower four that has been acknowledged.

The third line reads as MAP 1, display 66, alarm point 19, an unacknowledged global critical failure. The text description explains that this is a communication failure with devices monitoring Tower 19.

Device Reporting

The 46062-03 General Purpose Processor (GPP) can interrogate 128 displays of alarms. When you configure the GPP, each display occupies one position in the GPPs memory. For each MAP ID, the GPP then generates displays 65-67 internally which report device communication failures in the alarm system.

The 46062-02 General Purpose Processor (GPP) can interrogate 512 displays of alarms. For each MAP ID, this GPP then generates displays 65-73 internally which report device communication failures in the alarm system.

The individual device alarm point within the display corresponds to the position on the configuration polling list the device occupies.

NOTE: *The command CON will display the interrogation (polling) list. This will show which MAP and which display of that MAP occupies which position.*

- ♦ **Display 65**, points 1 through 64, is for the first 64 devices polled.

- ♦ **Display 66** is for the devices that occupy positions 65 through 128.

- ♦ **Display 67** reports communication failures with the slave GPPs and low battery indications if the standard size memory is installed. It is for devices that occupy positions 129 through 192 if the expanded memory is installed.

- ♦ **Display 68** is for devices that occupy positions 193 through 256.

- ♦ **Display 69** is for devices that occupy positions 257 through 320.

- ♦ **Display 70** is for devices that occupy positions 321 through 384.

- ♦ **Display 71** is for devices that occupy positions 385 through 448.

- ♦ **Display 72** is for devices that occupy positions 449 through 512.

- ♦ **Display 73** reports communication failures with the slave GPPs and low battery indications if the expanded memory is installed.

If the message "This is a slave" appears, it means one of the following:

- ♦ This Status Monitor is a slave; that is, it is in a listening mode only.

- ♦ The Status Monitor does not have a database configuration to tell it how to operate. Configure the Status Monitor.

- ♦ The Status Monitor is a master, but it is not communicating with 46020 Multiple Alarm Processors (MAPs). Investigate the communications failure.

PRINTER SYNTAX

ACKNOWLEDGE

Purpose:

Acknowledges local, global, or all alarms.

Format:

> ACK ALL
>
> ACK LOCAL
>
> ACK GLOBAL
>
> ACK LOCAL ID #
>
> ACK ID # DISP #
>
> ACK ID # DISP # PNT #

Remarks:

Acknowledges the alarms. All alarms are unipolar and must be acknowledged when they fail, but not when they return to normal.

LOC may be substituted for LOCAL, and is used to acknowledge local alarms only.

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from 1 through 64.

Input Example:

```
ACK ALL
```

Output Response:

```
ACK POINTS 12:57:01 10/14/91
OK
```

PRINTER SYNTAX

ACKNOWLEDGE LEVEL

Purpose:

Sets the operation of the acknowledge command to acknowledge audible devices.

Format:

> ACK LEVEL 1
>
> ACK LEVEL 2
>
> ACK LEVEL 3

Remarks:

LEVEL 1 - Setting the acknowledge level at one only allows the status monitor to acknowledge its own database and release its own alarm relays. This is the default setting.

LEVEL 2 - Setting the acknowledge level at two allows the status monitor to acknowledge its own database and release its own alarm relays. In addition, if acknowledged again within one second, it will release any relays of any status monitor that has a level set for greater than level one.

LEVEL 3 - Setting the acknowledge level at three allows the status monitor to acknowledge its own database and release its own alarm relays. In addition, if acknowledged again within one second, it will release any alarm relays that are set and acknowledge the database of any other status monitor that has a level set for three.

Entering an ACK LEVEL command after the initial acknowledgment has the same function as pressing the acknowledge button on the front panel of the status monitor.

Input Example:

```
ACK LEVEL 2
```

Output Response:

```
ACK LEVEL 2
```

PRINTER SYNTAX

Outputs when acknowledging level 2 or level 3 alarms:

Input Example:

```
ACK
```

Output Response:

```
ACK POINTS 17:32:31 03/09/93
```

Input Example:

```
ACK
```

Output Response:

```
ACK GPPS 17:32:43 03/09/93
```

ACTUATE

Purpose:

Momentarily sets the control points for alarm annunciators.

Format:

ACT ALL

ACT #

Remarks:

ACT ALL sets all control points.

ACT # sets the control point number(s) given in the command.

The symbol # can be an individual point, it can be a group of points, or it can be the term ALL, meaning all points. There are 64 possible control points.

Input Example:

```
ACT 1-4
```

Output Response:

OK

NOTE: *There is no other screen response to this command; however, control points one through four will actuate momentarily.*

ALARM CUTOFF

Purpose:

Disables or enables the external audible relays.

Format:

ACO

Remarks:

Toggles this function with each use.

Input Example:

ACO

Output Response:

ALARM CUT OFF IS ON 12:34:52 12/19/92

Input Example:

ACO

Output Response:

ALARM CUT OFF IS OFF 12:34:52 12/19/92

BELL

Purpose:

Reports if the terminal bell is on or off. Turns bell on or off; when bell is on, it sounds when a change of alarm status occurs.

Format:

BELL

BELL ON

BELL OFF

Remarks:

The command BELL causes the current status of the BELL feature to be displayed.

The other commands turn the bell on or off.

BEEP or DING can be substituted for BELL

Output Response:

Only the BELL command gives a response and that is to report if the bell is on or off.

CALL

Purpose:

Establishes a communications path to a MAP's printer port. This allows access to the MAP's Printer Syntax. Refer to the MAP's firmware manual for information about the MAP's syntax.

Format:

CALL #

Remarks:

Everything that you type is sent to the MAP.

To display the path, enter Ctrl-V and the command PATH after the question mark.

To exit, enter Ctrl-V and the command DISCONNECT, which will disconnect the path to the MAP.

The symbol # must be an individual MAP address. The possible range of device addresses can be 1 through 32

NOTE: *If you do not enter anything for 60 seconds, the path will automatically disconnect and the system will return to polling alarms.*

When the CALL command is active, you can only use the MAP's Printer Syntax commands. You cannot use the Status Monitor Syntax. To determine if the CALL command is still active, type the letter Q. If you get a response to the Q (Query) command, you are still in the MAP's Printer Syntax. If you get a COMMAND ERROR response, the CALL command has timed out and you are in the Status Monitor Syntax.

Input Example:

```
CALL 1
```

Output Response:

Everything that is displayed on the screen is the MAP's return response.

NOTE: *If the message "This is a slave" appears, it means one of the following:*

♦ This Status Monitor is a slave; that is, it is in a listening mode only.

♦ The Status Monitor does not have a database configuration to tell it how to operate. Configure the Status Monitor.

♦ The Status Monitor is a master, but it is not communicating with 46020 Multiple Alarm Processors (MAPs). Investigate the communications failure.

CONFIGURE

Purpose:

Displays, defines, reserves or clears the system configuration.

Format:

CONFIGURE

CONFIGURE POSITION

CONFIGURE POSITION #

CONFIGURE ID #-# DISPLAY #-#

CONFIGURE POSITION # SKIP #

CONFIGURE CLEAR ALL

CONFIGURE CLEAR #

PRINTER SYNTAX

Remarks:

CONFIGURE will display the interrogation (polling) list.

CONFIGURE POSITION shows the next position to be defined.

CONFIGURE POSITION # sets the position to be defined next.

CONFIGURE ID #-# DISPLAY #-# tells the system which ID numbers and DISPLAY numbers to poll.

NOTE: *You can duplicate addresses using the CONFIGURE ID #-# DISPLAY #-# command. Verify addresses by displaying the polling list with the CONFIGURE command. T/Shell uploads will* not *accept duplicate addresses.*

CONFIGURE POSITION # SKIP # reserves (leaves undefined) a number of displays. For example, POS 5 SKIP 10 means configure 5, skip positions 6 through 9, and configure 10 next.

CONFIGURE CLEAR ALL empties the configuration database.

CONFIGURE CLEAR # clears that position.

C0NFIG, or CONF, or CON may be substituted for CONFIGURE.

POSN or POS may be substituted for POSITION.

DISP may be substituted for DISPLAY.

CLR may be substituted for CLEAR.

The symbol # is an individual device. The possible range of numbers for ID is 1 to 32. The possible range of numbers for POSITION is from 1 to 128 for the 46062-03 and 1 to 512 for the 46062-02. The possible range of numbers for DISPLAY is from 1 to 64.

It is important to understand the different ways in which different DCPF devices report their alarm displays. Most DCPF devices that the Status Monitor will poll report up to 32 displays of alarms for each address entered in step 1. Other DCPF devices can report up to 64 displays at one address. The Status Monitor is capable of polling both.

For example, the MAP -40 can report 64 displays of alarms but to do so must report them using two addresses: displays 1 to 32 as the first address and displays 33 to 64 as the second. In this situation, configure the Status Monitor to poll the first 32 displays at the first address and as displays 1-32. The second group of 32 displays is configured to be polled at the second address but as displays 1-32 also. Note that while the displays are numbered 33-64 on the MAP -40, they are reported as displays 1-32 at the second address.

Another DCPF device, the MAP -41, is capable of reporting up to 128 displays of alarm information using two addresses. Displays 1-64 are reported at the first address and displays 65-128 at the second. Configure the Status Monitor to poll displays

1-64 at the first address and displays 1-64 at the second address. Note that while the displays are numbered 65-128 at the MAP -41, they are reported as displays 1-64 at the second address.

Refer to the Operation Manual specific to the device you are polling for details on that devices capabilities.

Input Example:

```
CON
```

Output Response:

```
POS 1 ID 1 DISP 5
POS 3 ID 1 DISP 7
POS 4 ID 1 DISP 32
POS 5 ID 3 DISP 1
POS 66 ID 1 DISP 66
OK
```

NOTE: *The command CON displays the interrogation (polling) list. The sample list above shows that the first device to be polled (position 1) will be MAP address 1, display 5. Position 2 is not being used, so the next device to be polled will be position 3, which is MAP address 1, display 7. Devices are polled in the order that they are listed in the position list.*

There are 64 possible displays of alarm information per address. Displays 65, 66, and 67 (plus displays 68 through 73 if the expanded memory option has been installed) are generated internal to the GPP and are used to report device communication failures within the alarm system. See OUTPUT MESSAGES.

CONTROL

Purpose:

Authorizes the use of control points for alarm annunciators.

Format:

CONTROL ON

CONTROL OFF

Remarks:

Allows a control point to be set by the ACTUATE command. If CONTROL is off, control points can not be set.

Input Example:

```
CONTROL OFF
```

Output Response:

There is no output response to this command; however, the ACTUATE command will not be allowed to set any control points.

CRITICAL

Purpose:

Displays critical alarms.

Format:

CRITICAL

Remarks:

The command CRITICAL displays both local and global critical alarms.

CRIT or A can be substituted for CRITICAL.

Input Example:

```
CRIT
```

Output Response:

```
1  5   3  G  AF (up to 30 character alarm point description)
1  5   4  L  A   TOWER FOUR LIGHT OUT
1  5   6  L  AF
1  7  15  G  A
1  7  19  L  A
```

PRINTER SYNTAX

This is a typical display of the alarm points that have been set. The first column is the address of the MAP, the second column is the display number, and the third column is the alarm point number. The fourth column indicates if it is local or global, and the last column gives the type of alarm (this is always an A, meaning critical). If the alarm has not been acknowledged, the letter F follows the type of alarm; if the alarm has been acknowledged, there is no F. If a description of this point has been entered, it is displayed.

The first line reads as MAP 1, display 5, alarm point 3, a global critical alarm that has not been acknowledged. The second line reads as MAP 1, display 5, point 4, which is a local critical alarm reporting the loss of a light on tower four that has been acknowledged.

DATE

Purpose:

Sets or displays the date.

Format:

DATE

DATE MM/DD/YY or MM-DD-YY

Remarks:

The command DATE displays the system date.

The command DATE followed by the month-day-year entry sets the system date.

Output Response:

The date is displayed when the command DATE is entered.

DESCRIBE

Purpose:

Assigns an easily understandable message to specific alarm points; for example, Tower light 4 is out.

Format:

DESCRIBE ID # DISPLAY # POINT #

At the ENTER TEXT prompt, type a description of 30 characters or less, including punctuation and spaces.

Remarks:

DESC can be substituted for DESCRIBE.

DISP can be substituted for DISP.

PNT can be substituted for POINT.

ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from 1 through 64

NOTE: *DISP can also be 65 through 67 for small GPPs or 65 through 73 for large GPPs. These can be used to describe device failure and/or low battery reports.*

PNT # can be any or all points from 1 through 64.

Input Example:

```
DESC ID 3 DISP 5 PNT 11
```

Output Response:

```
15:33:06 11-14-91 ENTER TEXT...
```

Input Message:

```
TOWER LIGHT 4 IS OUT
```

Output Response:

There is no output response; however, when the alarm is set, the failure message will include the text TOWER LIGHT 4 IS OUT.

DEVICE STATUS

Purpose:

Displays the current status of devices being polled.

Format:

DEVSTAT

Remarks:

Displays the status of the devices as of the last time they were interrogated. It takes three consecutive missed polls before a device is reported as failed.

Input Example:

```
DEVSTAT
```

Output Response:

```
LIST STATUS 12:58:29 10/14/91
1   5     NORM
1   7     NORM
1  32     FAIL
OK
```

NOTE: *The first column is the address of the MAP, the second column is the display number, and the message indicates if the device being interrogated is responding to the polls.*

DISPLAY

Purpose:

Displays either LOCAL only or GLOBAL only alarms (used with the masking switches S1-7 and S1-8 on the GPP module).

Format:

DISPLAY

Remarks:

Determines whether global or local alarms will be displayed.

Toggles this function with each use.

Input Example:

```
DISPLAY
```

PRINTER SYNTAX

Output Response:

```
DISPLAY MODE IS GLOBAL
OK
```

NOTE: *Switch S1-7 and/or switch S1-8 must be set to the appropriate position before the alarms can be masked.*

DOWNLOAD

Purpose:

Downloads the database from the master GPP to the slave GPP.

Format:

DOWNLOAD ALL

DOWNLOAD DESC ID # DISP # PNT #

DOWNLOAD CON

DOWNLOAD GPPSTAT

Remarks:

DOWNLOAD ALL will download the entire database, with the exception of the local/global display information. The other commands download the information specified.

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from number 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from 1 through 64.

EDIT

Purpose:

Used to edit alarm point description text, display, and level descriptions.

Format:

EDIT ID # DISP # POINT #

Remarks:

You can use the following commands when editing:

    carriage return = save and exit

    backspace = go back one space and erase

    ctrl-p (←) = go one character back

    ctrl-q (→) = go one character forward

    ctrl-r (↑) = go one description back

    ctrl-s (↓)= go one description forward

    ctrl-x = no change and exit

    ctrl-a = no change and edit

    ctrl-c = clear text and edit

    ctrl-b = go to beginning of text

    ctrl-e = go to end of text

    ctrl-t = go to end of text description

    ctrl-w = save and edit

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from number 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from 1 through 64.

Input Example:

```
EDIT ID 1 DISP 5 PNT 1
```

Output Response:

```
TOWER LIGHT 2 IS OUT L D
```

NOTE: *L stands for local alarm, and D is for a level D alarm.*

GPP CONTROL

Purpose:

Tells the system which slave GPP address numbers are valid.

Format:

GPP # ON

GPP # OFF

Remarks:

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. The possible range of device addresses can be from 1 through 32.

GPP IDENTIFICATION

Purpose:

Shows the identification number (address) of the GPP that is currently being used to access the system.

Format:

GPP ID

Input Example:

```
GPP ID
```

Output Response:

```
ID 1
OK
```

If the message "This is a slave" appears, it means one of the following:

♦ This Status Monitor is a slave; that is, it is in a listening mode only.

♦ The Status Monitor does not have a database configuration to tell it how to operate. Configure the Status Monitor.

♦ The Status Monitor is a master, but it is not communicating with 46020 Multiple Alarm Processors (MAPs). Investigate the communications failure.

GPP MODE SELECT

Purpose:

Informs operating system if GPP is being used as a Status Monitor or if it is in a stand-alone system.

Format:

GPP SM

GPP SA

Remarks:

SM must be selected when GPP is installed in the Status Monitor.

Input Example:

```
GPP SM
```

Output Response:

There is no output response to this command.

GPP STATUS

Purpose:

Lists the master and slave GPPs within the system. Shows their communication status (NORM or FAIL).

Format:

GPP STATUS

Remarks:

GPPSTAT can be substituted for GPP STATUS.

Input Example:

```
GPPSTAT
```

Output Response:

```
1 MYSELF
2 NORM
3 NORM
```

NOTE: *The first GPP listed is the master GPP; hence, the answer MYSELF.*

If the message "This is a slave" appears, it means one of the following:

♦ This Status Monitor is a slave; that is, it is in a listening mode only.

♦ The Status Monitor does not have a database configuration to tell it how to operate. Configure the Status Monitor.

♦ The Status Monitor is a master, but it is not communicating with 46020 Multiple Alarm Processors (MAPs). Investigate the communications failure.

LED

Purpose:

Tests the front panel LEDs audible alarm relays.

Format:

LED

Remarks:

The LEDs and relays activate for a moment, then the system returns to the live display.

Example:

```
LED
```

Output Response:

```
OK
```

PRINTER SYNTAX

NOTE: *There is no other output response to this command; however, the output relays and the front panel LEDs (GLB; NOR; ACO; GLOBAL and LOCAL CRITICAL, MAJOR, MINOR and STATUS) activate momentarily.*

LINEFEED

Purpose:

Reports if the linefeed is on or off. Turns the linefeed on or off.

Format:

LINEFEED

LINEFEED ON

LINEFEED OFF

Remarks:

This command functions only when a terminal is connected to the GPP module. It does not have any affect on the display on the screen on the Status Monitor.

The command LINEFEED shows if the linefeed is on or off.

The other commands turn the linefeed on or off.

LF can be substituted for LINEFEED.

Output Response:

Only the LINEFEED command shows a response and that is to report if the linefeed is on or off.

LIST

Purpose:

Displays all active alarms in the system, including levels and descriptions.

Format:

LIST ALL or LIST SYSTEM or SYSTEM

LIST GLOBAL

LIST LOCAL

LIST ID #

LIST ID # DISPLAY #

LIST ID # DISPLAY # POINT #

LIST A

CONTINUED . . .

LIST B

LIST C

LIST D

Remarks:

LIST ALL displays all active alarm points in the entire system. LIST SYSTEM or SYSTEM operates the same as LIST ALL. SYS can be substituted for system.

LIST GLOBAL displays all active alarm points described as GLOBAL in the database.

LIST LOCAL displays all active alarm points described as LOCAL in the database.

LIST ID # displays all active alarm points assigned to that address.

LIST ID # DISPLAY # displays all active alarm points assigned to that ID and display.

LIST ID # DISPLAY # POINT # displays the description of the active alarm point located in that display of that ID.

LIST A displays all active alarm points described as A in the database.

LIST B displays all active alarm points described as B in the database.

LIST C displays all active alarm points described as C in the database.

LIST D displays all active alarm points described as D in the database.

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices.

ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from 1 through 64.

Input Example:

```
LIST ALL
```

PRINTER SYNTAX

Output Response:

```
1   5   3   L   AF  (up to 30-character alarm point description)
1   5   4   L   C   TOWER FOUR LIGHT OUT
1   5   6   L   CF
1   7  15   L   C
1  66  19   G   AF  COMMUNICATION FAILURE TOWER 19
```

This is a typical display of the alarm points that have been set. The first column is the address of the MAP, the second column is the display number, and the third column is the alarm point number. The fourth column indicates if it is local or global, and the last column gives the type of alarm (A for critical, B for major, C for minor, and D for status). If the alarm has not been acknowledged, the letter F follows the type of alarm; if the alarm has been acknowledged, there is no F. If a description of this point has been entered, it is displayed.

The first line reads as MAP 1, display 5, alarm point 3, a local critical alarm that has not been acknowledged. The second line reads as MAP 1, display 5, point 4, which is a local routine alarm reporting the loss of a light on tower four that has been acknowledged.

The last line reads as MAP 1, display 66, alarm point 19, an unacknowledged global critical failure. The text description explains that this is a communication failure with the devices monitoring Tower 19.

A MAP can report up to 64 displays (32 for some MAP firmware) of alarm information. For MAP 1 only, displays 65, 66, and 67 (plus displays 68 through 73 if the expanded memory option has been installed) are generated internal to the GPP and are used to report device communication failures within the alarm system. See OUTPUT MESSAGES.

LOCK

Purpose:

Locks the GPP's printer port so it will not accept commands that change system configuration or set control points.

Format:

LOCK

Remarks:

Effectively locks the system and protects it from being altered. If a password has been assigned, it also must be entered after the UNLOCK command is given to access the system again. Commands that display system data are still available.

Input Example:

```
LOCK
```

Output Response:

```
SYSTEM LOCKED
OK
```

LOG

Purpose:

Reports if the logging feature is on or off. Turns on or off the logging feature.

Format:

LOG

LOG ON

LOG OFF

Remarks:

The LOG command shows if the logging feature is on or off.

The LOG ON command turns logging on. Alarm and device failures will be reported.

The LOG OFF command turns logging off. Alarm and device failures will not be reported. The most recent failures, however, will be stored in memory and displayed when the logging feature is turned ON.

Output Responses:

Only the command LOG gives a response and that is to report if logging is on or off.

NOTE: *When logging is on, alarms and device failures will be reported automatically. See OUTPUT MESSAGES for examples of reports.*

MAJOR

Purpose:

Displays all major alarms.

Format:

MAJOR

Remarks:

The command MAJOR displays all major alarms.

MAJ or B can be substituted for MAJOR.

Input Example:

```
B LOCAL
```

Output Response:

```
1   5   3   L   BF  (up to 30-character alarm point description)
1   5   4   L   B   TOWER FOUR LIGHT OUT
1   5   6   L   BF
1   7  15   L   B
1   7  19   L   B
```

This is a typical display of the alarm points that have been set. The first column is the address of the MAP, the second column is the display number, and the third column is the alarm point number. The fourth column indicates if it is local or global, and the last column gives the type of alarm (this is always a B, meaning major). If the alarm has not been acknowledged, the letter F follows the type of alarm; if the alarm has been acknowledged, there is no F. If a description of this point has been entered, it is displayed.

The first line reads as MAP 1, display 5, alarm point 3, a global major alarm that has not been acknowledged. The second line reads as MAP 1, display 5, point 4, which is a local major alarm reporting the loss of a light on tower four that has been acknowledged.

MASTER/SLAVE

Purpose:

Displays if the GPP you are using is a master or slave.

Format:

MS

Input Example:

```
MS
```

Output Response:

```
THIS IS A MASTER.
```

If the message "This is a slave" appears, it means one of the following:

♦ This Status Monitor is a slave; that is, it is in a listening mode only.

♦ The Status Monitor does not have a database configuration to tell it how to operate. Configure the Status Monitor.

♦ The Status Monitor is a master, but it is not communicating with 46020 Multiple Alarm Processors (MAPs). Investigate the communications failure.

MINOR

Purpose:

Displays all minor alarms.

Format:

MINOR

Remarks:

The command MINOR displays all minor alarms.

MIN or C can be substituted for MINOR.

PRINTER SYNTAX

```
        MIN
```

Output Response:

```
1   5    3   G   CF (up to 30-character alarm point description)
1   5    4   L   C   TOWER FOUR LIGHT OUT
1   5    6   L   CF
1   7   15   G   C
1   7   19   L   C
```

This is a typical display of the alarm points that have been set. The first column is the address of the MAP, the second column is the display number, and the third column is the alarm point number. The fourth column indicates if it is local or global, and the last column gives the type of alarm (this is always a C, meaning minor). If the alarm has not been acknowledged, the letter F follows the type of alarm; if the alarm has been acknowledged, there is no F. If a description of this point has been entered, it is displayed.

The first line reads as MAP 1, display 5, alarm point 3, a global minor (level C) alarm that has not been acknowledged. The second line reads as MAP 1, display 5, point 4, which is a local minor alarm reporting the loss of a light on tower four that has been acknowledged.

PAGE

Purpose:

Reports if the paging feature is on or off. Turns the paging feature on or off.

Format:

PG

PG ON

PG OFF

Remarks:

With the page turned on, only the amount of data that fits on one display screen is shown at a time, with subsequent pages displayed as the Enter key is pressed.

PG reports if the paging feature is on or off.

CONTINUED . . .

PG ON turns paging on.

PG OFF turns paging off.

NOTE: *PAGE must be off when using a printer.*

Input Example:

```
PG
```

Output Response:

```
PAGING OFF
OK
```

PASSWORD1/PASSWORD2

Purpose:

Sets password or passwords for system security.

Format:

PASSWORD1

PASSWORD2

Remarks:

Entry is followed by a query for a new password. If an old password exists, you must enter it before setting a new one. As the password is entered, asterisks appear on the screen to safeguard the identity of the password. Maximum length is seven characters.

If no password is desired, press ENTER when a new password is requested.

This firmware allows the use of two separate passwords. Use of either one gives full access to the system.

The following commands are password protected:

All control point commands

All configuration commands

UNLOCK

NOTE: *Do not lose the password! If the password is lost, the system can not be accessed unless the backup power for the memory on the GPP is interrupted. Interrupting the backup power will erase the entire database (the configuration, individual point descriptions, etc.).*

For security reasons PASSWORD1 OR PASSWORD2 should not be included as part of the configuration database file that is to be downloaded. The GPP to be loaded should be unlocked, using the appropriate password, prior to downloading. If a password is included in the database file, anyone with access to the computer storage medium (hard drive or floppy disk, etc.) can discover the password by reviewing the database file.

Input Example:

```
PASSWORD1
```

Response:

```
NEW PASSWORD 1: *******
```

NOTE: *To change the password, you must first enter the existing password before the system will accept a new password.*

RELAY TIME OUT

Purpose:

Sets the amount of time that the relays that control the external audible and visual alarms are energized.

Format:

RELAY TIME OUT

RELAY TIME OUT ON

RELAY TIME OUT OFF

RELAY TIME OUT #

Remarks:

RELAY TIME OUT # set the time-out. # is a whole number between 2 and 30 that represents the amount of time in minutes that the relays that control the external alarms will be turned on.

CONTINUED . . .

RELAY TIME OUT shows the setting of the time-out (in minutes) and whether it is on or off.

RELAY TIME OUT ON and RELAY TIME OUT OFF set the time-out to be either on or off.

The system default is RELAY TIME OUT ON 2 minutes.

Input Example:

```
RELAY TIME OUT 5
```

Output Response:

```
RELAY TIME OUT ON 5 MINUTES
```

REMARK

Purpose:

Places a comment or notation in the log.

Format:

REMARK

Remarks:

REM or ; may be substituted for REMARK.

The message can equal one line in length (approximately 72 characters).

Input Example:

```
REM INTERMITTENT PROBLEM ON TOWER 4, NEED ADDITIONAL EQUIPMENT.
```

Output Response:

There is no response to this command; however, the message will appear on the log.

REMOTE BAUD

Purpose:

Displays the baud of the data port or changes the baud between 1200 and 9600.

Format:

REMOTE BAUD

REMOTE BAUD 1200

REMOTE BAUD 9600

Remarks:

REMOTE BAUD displays the baud of the data port.

REMOTE BAUD 1200 sets the baud of the data port to 1200.

REMOTE BAUD 9600 sets the baud of the data port to 9600.

Input Example:

```
REMOTE BAUD
```

Output Response:

```
REMOTE BAUD 9600
```

Only the command REMOTE BAUD gives a response.

REPORT

Purpose:

Reports all alarm point descriptions.

Format:

REPORT ALL

REPORT ID #

REPORT ID # DISP #

REPORT ID # DISP # POINT #

Remarks:

Reports all alarm point descriptions by ID number, ID and display number, or by ID and display and point number.

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from 1 through 64.

Input Example:

```
REPORT ID 1 DISP 5 PNT 32
```

Output Response:

```
1   5  32   LM TOWER 4 LIGHT OUT
```

NOTE: *This reads as address 1, display 5, alarm point 32, which is a local minor alarm indicating that tower 4 light is out.*

To stop a report, press D on the front panel of the Status Monitor or type Ctrl+D if you have a keyboard.

To pause a report, press ENTER on the front panel of the Status Monitor or type Ctrl+S if you have a keyboard. To resume the report, press ENTER (or Ctrl+S) again.

REPORT CONTROL

Purpose:

Displays the control point information for alarm annunciators.

Format:

REPORT CONTROL ALL

REPORT CONTROL #

Remarks:

Reports which alarm points are associated with the specified control points.

There can be up to a total of 64 control points, with a maximum of two points assigned to each alarm point.

A control point can be assigned to more then one alarm point.

The symbol # can be a control point or a range of numbers from 1-64.

Input Example:

```
REPORT CONTROL 1-2
```

Output Response:

```
5   2   7   L   CN  C-1     C-2
```

NOTE: This response indicates that control points one and two will be set (turned on) when there is an alarm at ID 5 Disp 2 point 7.

RESET

Purpose:

Resets the system.

Format:

RESET

RESET ALL

Remarks:

RESET resets the system without erasing the database. Turns relays ON momentarily.

WARNING: RESET ALL resets the system and erases all memory (configuration, point descriptions, etc.).

RESPOND IDENTIFICATION

Purpose:

Assigns the control point information to the alarm points.

Format:

RESP ID # DISP # PNT # TO CTRL #,#

Remarks:

Up to two control points can be assigned to any alarm point.

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from number 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from point 1 through 64.

CTRL # can be any or all points from 1 through 64, up to two points can be assigned to each alarm.

Input Example:

```
RESP ID 5 DISP 2 PNT 7 TO CTRL 2,6
```

Output Response:

There is no immediate response to this command; however, when the alarm is set, control points 2 and 6 will be set.

REVISION LIST

Purpose:

Displays the firmware's revision number.

Format:

REV

Remarks:

Status Monitors with the expanded memory option will have X82-00283-0X firmware, those without will have X82-00300-0X.

Input Example:

```
REV
```

Output Response:

```
DANTEL COS POLLING STATUS MONITOR 1 meg
COPYRIGHT 1991
PART# X82-00283-0X
OK
```

Input Example:

```
REV
```

PRINTER SYNTAX

```
DANTEL COS POLLING STATUS MONITOR
COPYRIGHT 1991
10-10-91
PART# X82-00300-0X
OK
```

SEND

Purpose:

Passes 70-character text messages between the terminal connected to the printer port and those connected to the master port.

Format:

SEND [70-character text message]

Remarks:

Provides communications between the location of the printer port device (any ASCII device: dumb terminal, personal computer, printer, etc.) and the master port device (an alarm system master, ASCII terminal or computer, etc.). Helpful for transmitting system maintenance information between personnel. The message is limited to 70 characters or less.

Input Example:

```
SEND SET RCV LEV MODEM 4 @ -8 DBM
```

Output Response:

There is no response to this command; however, the terminal connected to the master port displays the following:

```
P1 - SET RCV LEV MODEM 4 @ -8 DBM
```

NOTE: *P1 identifies the printer port; if the master port had originated the message the terminal on the printer port would have displayed: M1 - SET RCV LEV MODEM 4 @ -8 DBM.*

Sᴇᴛ ID

Purpose:

Changes the characteristics of an individual alarm point.

Format:

SET ID # DISPLAY # POINT # GLOBAL CRITICAL.

SET ID # DISPLAY # POINT # LOCAL CRITICAL.

SET ID # DISPLAY # POINT # GLOBAL MAJOR.

SET ID # DISPLAY # POINT # LOCAL MAJOR.

SET ID # DISPLAY # POINT # GLOBAL MINOR.

SET ID # DISPLAY # POINT # LOCAL MINOR.

SET ID # DISPLAY # POINT # GLOBAL STATUS.

SET ID # DISPLAY # POINT # LOCAL STATUS.

Remarks:

When an alarm point is defined or redefined, the changes are written to the database in nonvolatile memory along with all other system configuration information.

The following abbreviations can be used:

USE...	IN PLACE OF...
DISP	DISPLAY
PNT or P	POINT
GLOB	GLOBAL
LOC	LOCAL
CRIT or A	CRITICAL
MAJ or B	MAJOR
MIN or C	MINOR
STAT	STATUS

The symbol # can be an individual device, it can be a group of devices, or it can be the term ALL, meaning all devices. ID # can be any or all addresses from 1 through 32.

DISP # can be any or all displays from 1 through 64 (and GPP's internal displays 65-73).

PNT # can be any or all points from 1 through 64.

Input Example:

```
SET ID 11 DISP 25 PNT 55 CRIT
```

Output Response:

There is no output response to this command; however, alarm point 55 in display 25 for address 11 is now a critical alarm.

STATUS

Purpose:

Displays all status alarms.

Format:

STATUS

Remarks:

STAT or D may be substituted for STATUS.

Input Example:

```
STAT
```

Output Response:

```
1  5   3  G  DF (up to 30-character alarm point description)
1  5   4  L  D   TOWER FOUR LIGHT OUT
1  5   6  L  DF
1  7  15  G  D
1  7  19  L  D
```

This is a typical display of the alarm points that have been set. The first column is the address of the MAP, the second column is the display number, and the third column is the alarm point number. The fourth column indicates if it is local or global, and the last column gives the type of alarm (this is always a D, meaning status). If the alarm has not been acknowledged, the letter F follows the type of alarm; if the alarm has been acknowledged, there is no F. If a description of this point has been entered, it is displayed.

The first line reads as MAP 1, display 5, alarm point 3, a global status (level D) alarm that has not been acknowledged. The second line reads as MAP 1, display 5, point 4, which is a local status alarm reporting the loss of a light on tower four that has been acknowledged.

TIME

Purpose:

Displays or sets the system time.

Format:

TIME

TIME hh-mm-ss

Remarks:

The command TIME will display the current time.

The command TIME followed by the hour-minute-seconds entry will set the time. Time is entered in 24-hour format.

Output Response:

The command TIME displays the current time.

UNLOCK

Purpose:

Unlocks the GPP so it will accept commands that change the system configuration or operate control points.

Format:

UNLOCK

Remarks:

If a password has been set, it will be requested before the system can be unlocked.

Input Example:

```
UNLOCK
```

Output Response:

```
Password : ****
System Unlocked
```

TECHNICAL SPECIFICATIONS

DESCRIPTION	VALUE
Input Voltage	-21 to -56 VDC
Input Current @ -48 VDC	
Idle	70 mA
Maximum	108 mA
Heat Dissipation @ -48 VDC	
Idle	11.6 Btu/hr
Maximum	17.9 Btu/hr
Weight	1 lb. 1.25 oz.
Physical Dimensions	1.4"W x 6.0"D x 5.6"H
Operating Temperature Range	0° to 55° C.
Electromagnetic Interface	FCC Part 15; Class A

NOTES

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

Dantel

P.O. Box 55013 • Fresno, CA 93747-5013   Phone (559) 292-1111   Fax (559) 292-9355   http://www.dantel.com