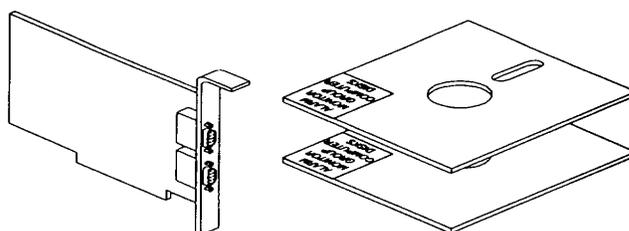
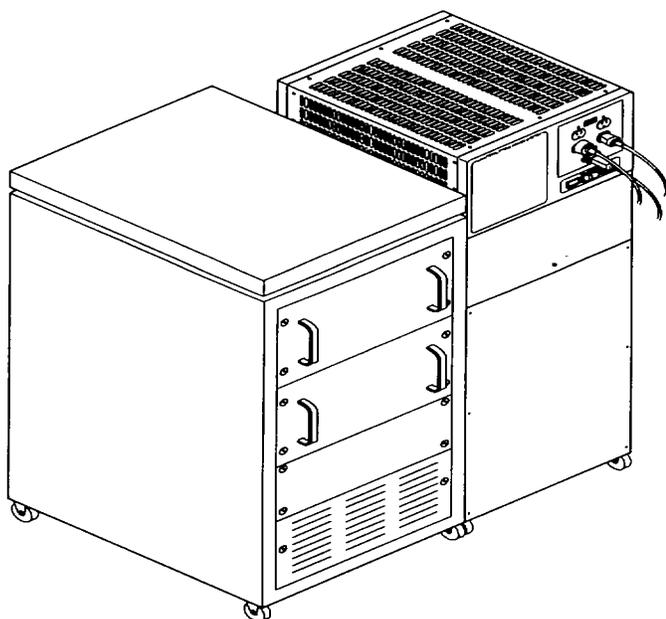


OPERATOR'S MANUAL

**ALARM-MONITOR GROUP (AMG)
OA-9431/FSS-9(V) CAGEC 97403**

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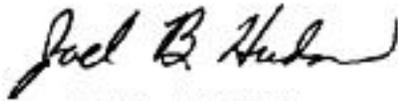
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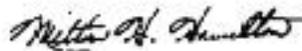
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OPERATOR'S MANUAL
ALARM-MONITOR GROUP (AMG)
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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <daf2028@st-louis-emh7.army.mil>. A reply will be furnished directly to you.

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HOW TO USE THIS MANUAL

DESCRIPTION OF THE MANUAL

Manual Organization. This manual is designed to help you operate and maintain the Alarm-Monitor Group (AMG) OA-9431/FSS-9(V).

The front cover of this manual provides an index that lists subjects that are commonly used. Each item indexed on the front cover has a black box at the edge of the cover. There is a corresponding black box on the first text page for each subject listed on the cover index.

The Table of Contents is provided for quick reference to the subjects covered by each chapter, section, and appendix. Chapter 2 also has a subject index that lists the major paragraphs and some subordinate paragraphs in numerical order under the section title.

The major elements of this manual are its chapters and appendixes. The chapter and appendixes can be divided into one or more sections. This manual has three chapters and five appendixes.

A glossary follows the last appendix. The glossary lists and explains the special or unique abbreviations and the unusual terms used in this manual.

An alphabetical index follows the glossary. That index is for use in locating specific items of information.

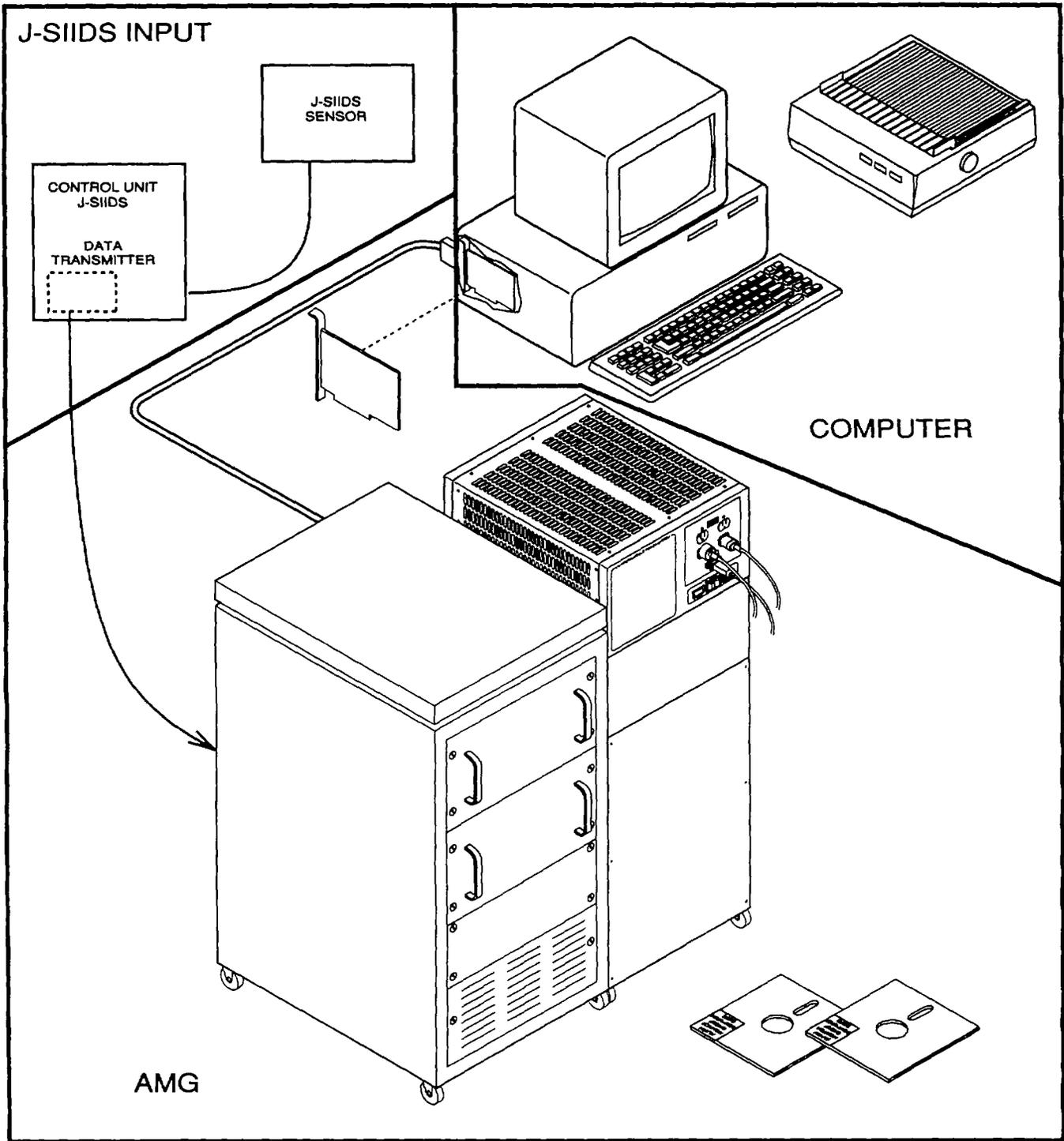


Figure 1-1. Functional Installation (Typical)

CHAPTER 1**INTRODUCTION****SECTION I. GENERAL INFORMATION****1.1 SCOPE.**

This manual is for your use in operating and maintaining the Alarm-Monitor Group (AMG) OA-9431/FSS-9(V). The AMG requires a user furnished IBM-PC/AT compatible computer with MS-DOS Version 3.2 or higher, keyboard, color monitor, dot matrix printer to make the AMG functional (figure 1-1). When used in conjunction with the computer, the AMG replaces the Monitor Cabinet(s) of the Joint Service Interior Intrusion Detection System (J-SIIDS) and enhances existing J-SIIDS installations.

1.2 MAINTENANCE FORMS AND RECORDS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

1.3 CORROSION PREVENTION AND CONTROL(CPC).

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form 368, Product Quality Deficiency Report. Use of key words such as "corrosion, " "rust, " "deterioration, " or "cracking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA PAM 738-750.

1.4 DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Refer to TM 750-244-3 for instructions on destruction of Army materiel to prevent enemy use.

1.5 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your OA-9431/FSS-9(V) needs improvement, let us know. Send us an EIR. You, the user are the only one who can tell what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We will send you a reply.

1.6 WARRANTY INFORMATION.

Warranty program is governed by DA PAM 738-750. Report all defects in material and workmanship to your supervisor, who will take appropriate action.

® Microsoft and MS-DOS are registered trademarks of the Microsoft Corporation.

1.7 NOMENCLATURE. CROSS REFERENCE LIST.

Refer to table 1-1.

Table 1-1. Nomenclature Cross Reference List.

Common Name	Official Nomenclature
Computer Application software, AMG operating system, or AMG program	Consists of: IBM-PC/AT compatible computer Keyboard Color Monitor Dot Matrix Printer AMG PC Software Diskette Number 1 and AMG PC Software Diskette Number 2

1.8 LIST OF ABBREVIATIONS.

Refer to the glossary located at the back of this manual.

1.9 GLOSSARY.

Refer to the glossary located at the back of this manual.

SECTION II. EQUIPMENT DESCRIPTION AND DATA**1.10 EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.**

The AMG Group with its computer is composed of two major groups.

1.10.1 AMG Equipment Characteristics, Capabilities and Features. The AMG equipment consists of a Converter Multiplexer Assembly (CMA), Uninterruptible Power Supply (UPS), Communications Circuit Card Assembly (CCA) and AMG application software consisting of two 5-1/4 inch disks. The Communications CCA is installed in the computer. The AMG is designed to receive signals from up to 64 remote areas and provides software support. In addition, the UPS provides uninterruptible power to the CMA and computer.

1.10.2 IBM-PC/AT Compatible Computer. The IBM-PC/AT compatible computer consists of a personal computer, color monitor, and dot matrix printer. These items are furnished by the user. The personal computer must have a hard drive, 5 1/4 inch floppy disk drive as drive A, and parallel printer port. Refer to the manuals provided with the personal computer, color monitor, and dot matrix printer for additional information. In addition, this computer must operate with MS-DOS® version 3.2 or higher.

1.10.3 J-SIIDS Capabilities and Features. The AMG, when used with an IBM-PC/AT compatible computer, is designed to operate with the J-SIIDS. Refer to TM 5-6350-264-14-1 for characteristics, capabilities and features of the J-SIIDS.

1.11 LOCATION OF MAJOR COMPONENTS.

The AMG has four major components which are the UPS, CMA, Communications CCA, and the AMG application software on two 5 1/4 inch disks. Refer to Chapter 2 paragraph 2.1 for the operator controls and indicators for the AMG.

1.12 EQUIPMENT DATA.

This paragraph provides performance data, including numerical and other specification related data. It summarizes the specific capabilities and limitations of the equipment and other critical data needed.

1.12.1 Uninterruptible Power Supply (UPS) Equipment Data. The data for the UPS are as follows:

Input:
 Voltage: 100, 120, 230, or 240 V ac at 60 Hz
 or 100, 120, 230, or 240 V ac at 50 Hz

Output:
 Power Rating: 1500 Volt amps
 Voltage: 120 V ac at 60 Hz ± 3 Hz
 Waveform: True Regulated Sine Wave
 Harmonic Distortion: Less than 5% total
 Operating Temperature: 320 to 1040 F (00 to 400C)
 Battery Backup: At least four hours

Weight:
 with batteries: 670 lbs (304 kg)
 without batteries: 208 lbs (094 kg)

Batteries:
 Weight 77 lbs (33 kg)
 Nominal Voltage: 12 V dc
 Charging Voltage: 13.5 to 13.6 V dc at 770 F (250 C)
 Max Charger Current: 22 amps
 Discharge Current: 351 amps to 1.75 volt/cell
 Internal Resistance 3.9 Megaohms
 (Charge)
 Operating Temperature: 320 to 800 F (00 to 450 C)
 Rated 110 Amp/hour
 Total Required Six (sealed cell)

Dimensions in inches:

Height	Width	Depth
45.25 (1.15 m)	17 (43.18 cm)	21 (53.34 cm)

1.12.2 Converter-Multiplexer Assembly (CMA) Equipment Data. The data for the CMA is as follows:

Weight: 250 lbs (114 Kg)

Dimensions in inches:

Height	Width	Depth
42.5 (1.08 m)	22.5 (57.15 cm)	31.5 (80.01 cm)

1.12.3 IBM-PC/AT Compatible Computer Data. The system requires the computer to operate using 120 V ac power at 60 Hz. The minimum requirements for the equipment is as follows:

Computer:

- Industry Standard Architecture (ISA) Bus computer (8-bit bus) or compatible
- 8 MHz
- 20 MByte Hard Drive
- 5 1/4 Inch double density (360K) or 5 1/4 Inch high density (1.2M) drive for Drive A
- Parallel printer port
- Enhanced Graphics Adapter (EGA) video driver board
- Standard IBM-PC/AT compatible Keyboard
- 640 Kbyte RAM

Operating Software:

- MS-DOSS version 3.2 or higher

Monitor:

- EGA compatible color monitor with 13 inch screen

Printer:

- Dot matrix
- Parallel communications interface
- Error or fault output on pin 32 (paper out, offline, printer error)
- Tractor feed

Optional Equipment:

- Computer equipment cart or table
- Floppy disk drive lock
- Surge protection power strip
- Virus checking software

1.12.4 J-SIIDS Equipment Data. Refer to TM 5-6350-264-14-1 for the J-SIIDS equipment data.

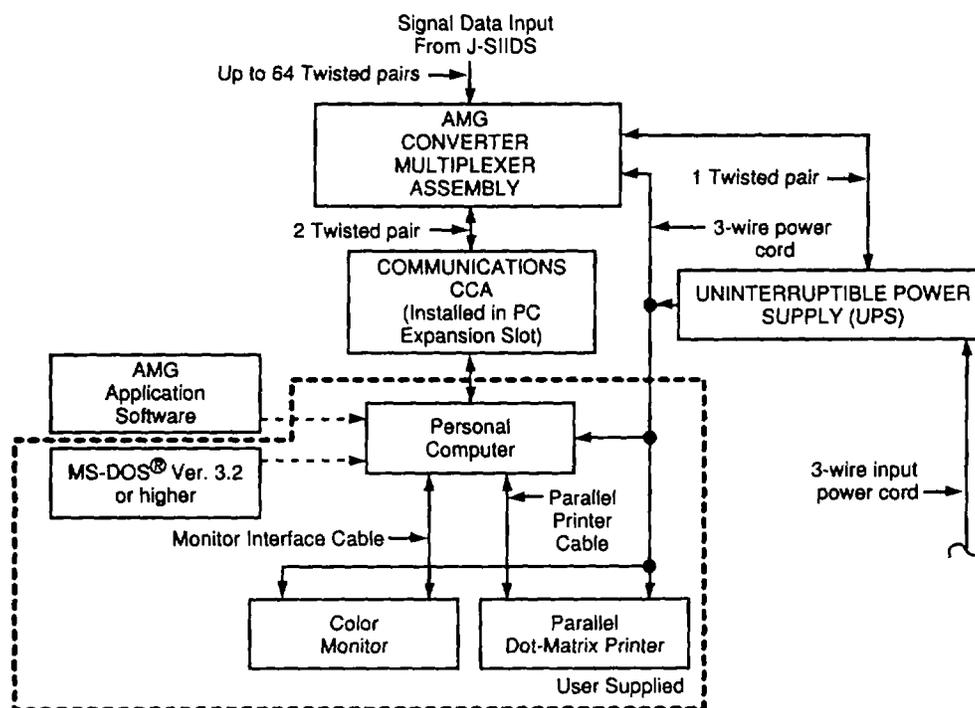


Figure 1-2. Simplified Functional Diagram (Typical).

SECTION III. PRINCIPLES OF OPERATION

1.13 FUNCTIONAL DESCRIPTION OF HARDWARE.

The AMG requires a user furnished computer to monitor remote area status information (figure 1-2). The UPS provides the ac power input to the CMA and computer. The CMA receives signals from up to 64 remote areas that contain area status information. Each signal is transmitted from a remote area by the J-SIIDS system Data Transmitter for up to 10 miles over dedicated telephone lines or 600-ohm balanced transmission lines. The signals are received by the AMG equipment. The AMG provides the signals to the computer for processing and display. An audible tone occurs for status changes. The following paragraphs provide a more detailed description of the AMG and computer.

1.13.1 J-SIIDS Functional Description. The J-SIIDS monitors various remote areas and provides status to the operation center for physical security. The status information is Alarm/No Alarm; Access/Secure; AC Power/AC Power Fail (Battery Power). Refer to J-SIIDS TM 5-6350-264-14-1 for detailed information.

1.13.2 Uninterruptible Power Supply (UPS) Functional Description. The UPS is an on-line uninterruptible power system. It provides continuous power to the CMA and computer. In the event there is a loss of power, it also provides at least 4 hours of backup ac power before recharging is necessary. When a loss of power occurs, the power loss is detected and battery operation is indicated at the monitor.

1.13.3 Converter Multiplexer Assembly (CMA) Functional Description. The CMA interfaces with the remote areas that are being monitored. It also interfaces with the computer and the Uninterruptible Power Supply (UPS).

1.13.4 Communications Circuit Card Assembly Functional Description. The Communications CCA is installed in the computer and provides the interface between the computer and the CMA.

1.13.5 IBM-PC/AT Compatible Computer Functional Description. The computer consists of a personal computer, monitor, printer, and operating software. The Communications CCA and application software provided with the AMG are installed in the personnel computer. The application software is downloaded (copied to the hard drive) to the computer. The application software then controls the hardware functions of the computer. When the computer is powered on, the application software is initialized. This causes the computer to automatically start the application software and generates an initialization screen on the color monitor for a few seconds, and then displays the Remote Area Status Changes Screen. The computer is now programmed to accept information from the CMA and displays operational information on the color monitor. Information is sent to the printer.

1.14 AMG APPLICATION SOFTWARE FUNCTIONAL DESCRIPTION.

The application software controls the operation of the computer and the CMA. The application software provides two modes of operation which are the Setup Mode and Secure Mode. After the software is copied, the application software is used to configure the AMG operating system and is accomplished in the Setup Mode. The Secure Mode monitors and reports the status of the remote areas and AMG components.

1.14.1 Setup Mode. Setup is performed only by designated personnel that have access to a password. When the correct password is provided, the application software goes into the Setup Mode. The Setup Mode is menu driven and allows the AMG operating system to be configured.

The Setup Mode allows up to 64 areas to be selected for monitoring. The remote areas are divided into groups of eight called modules. Table 1-2 provides a module number and its associated monitored area. Each module can either be in an ON (being monitored) or OFF (not being monitored) condition. When the modules have been activated, the remote areas can be selected and in either an ON or OFF condition. In addition, each area can be assigned a priority between 1 and 4. Each remote area can also be named and area notes provided.

Table 1-2. AMG Modules.

Module Number	Monitored Areas
1	1-8
2	9-16
3	17-24
4	25-32
5	33-40
6	41-48
7	49-56
8	57-64

The Setup mode also allows selection of the way remote area status changes are displayed, times that status reports are printed, setting of the time and date, and changing of the password. When setup is completed, the AMG operating system is ready for use. If changes are required, return to the setup mode.

1.14.2 Setup Screens. There are four setup screens. The first screen provides the setup menu. The menu screen is used to select the other three screens, return to the Secure Mode of the AMG software or exit to MS-DOS® operating system. The other three screens are the Remote Area Setup, Module Setup and System Setup. In addition, Setup Area Notes can be selected while in the Remote Area Setup.

1.14.3 Secure Mode. The AMG software configuration file provides information required by the application software. The application software configuration determines which modules are ON, which modules are OFF, which areas are being monitored and

which areas are not being monitored. There are eight modules that can be selected and each module monitors eight areas. Table 1-2 provides a module to area association.

The application software continuously receives updated status information for each area which is processed for display and printing. If status changes have occurred, an audible alarm is given and the display screens are updated. The type of status change can be determined by looking at the display screen and is acknowledged by the operator. Status changes that have not been acknowledged are displayed by flashing text.

1.15 SECURE MODE SCREENS.

There are four display screens in the Secure Mode. Each display screen provides different types of information to the operator or supervisor and each display screen provides a summary of the system status. Each display screen is selected by pressing the function key associated with the display screen. Function keys that control selection of display screens are as follows:

- <F4> Monitor Area Screen
- <F5> Remote Area Status Screen
- <F6> Remote Area Notes Screen
- <F7> Remote Area Status Changes Screen

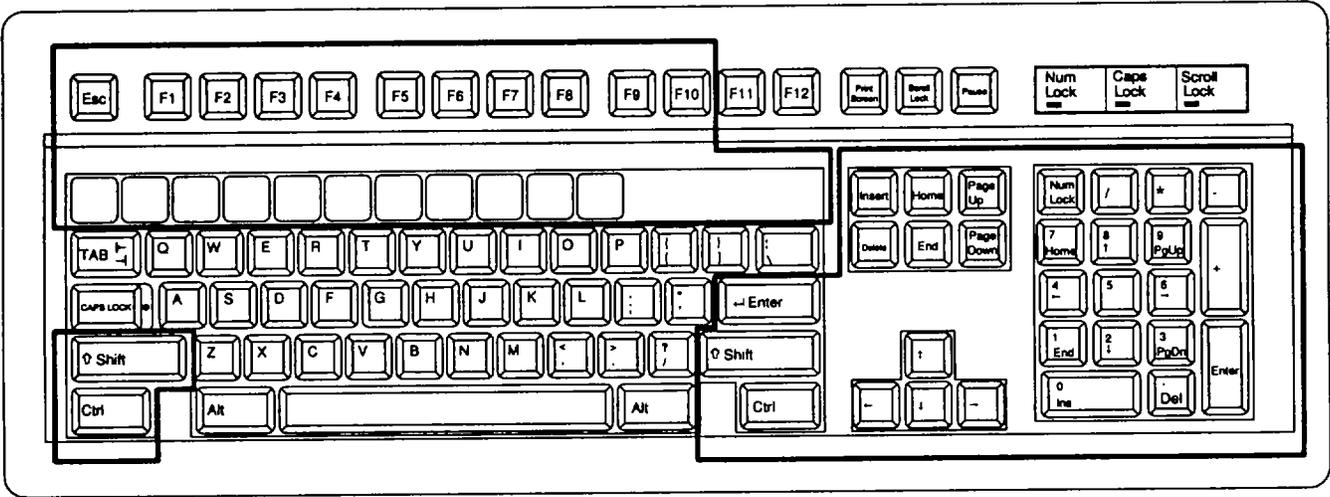


Figure 1-3. Keyboard Setup (Typical).

1.15.1 Special Features. The AMG has been designed to provide easy operation and uses the color scheme provided in table 1-3. The color codes allow visual detection of status changes or alarms. Designated features are provided in table 1-4. In addition, if there is no area selected, the AMG software automatically selects an area that has a status change and displays the information on the command line. The + and - (figure 1-3) keys can be used to select either the next area (+) or previous area (-).

Table 1-3. Color Scheme

Color Scheme	Condition
Green	Secure and AC Power
Yellow	Access, Battery, or Maintenance
Red	Alarm
White on Red	Communications failure or Alarm

Table 1-4. Features

Feature	Purpose
<Esc>	Clears a selected area from the command line. Also clears operator input for "Area:" or "Password."
Automatic Synchronization	The AMG Monitor program automatically synchronizes with the J-SIIDS data transmitters communication, eliminating the need for a maintainer to press the resynchronization button in the J-SIIDS control unit. This also eliminates the need for code plugs at the status monitoring equipment.
"CHANGE"	On the print out, this is printed with an area number or module number and indicates a status change occurred on that area or module.
"ACK"	On the print out, this is printed with an area number or module number and indicates that a status change was acknowledged for that area or module.
"RESET"	On the print out, this is printed with an area number or module number and indicates that an alarm was reset for that area or module.
"**"	The purpose of the asterisk is to identify status changes such as "CHANGE", "ACK", or "RESET" for an area or module.
"COM-norm-000"	On the print-out, this is printed for an area when the communication with the area is good.
"COM-FAIL-xyz"	On the print out, this is printed for an area when there is a communication problem. "x", "y" and "z" can each be either a "0" or "1." When set to "1", represents a loss of synchronization; "y" represents a loss of data signal; "z" represents a line fault (low signal level).
"Resync-M"	On the print out, this is printed for an area when the resynchronization button was pressed at the J-SIIDS control unit (manual resync).

Table 1-4. Features (continued)

Feature	Purpose
"Resync-A"	On the print out, this is printed for an area when the AMG Monitor program automatically synchronizes the communications with an area.
"COM-FAIL-100 Resync-M"	On the print out, these two phrases are printed on the same line for an area when there is an improper manual synchronization attempt. This could be a spoofing attempt by an adversary.

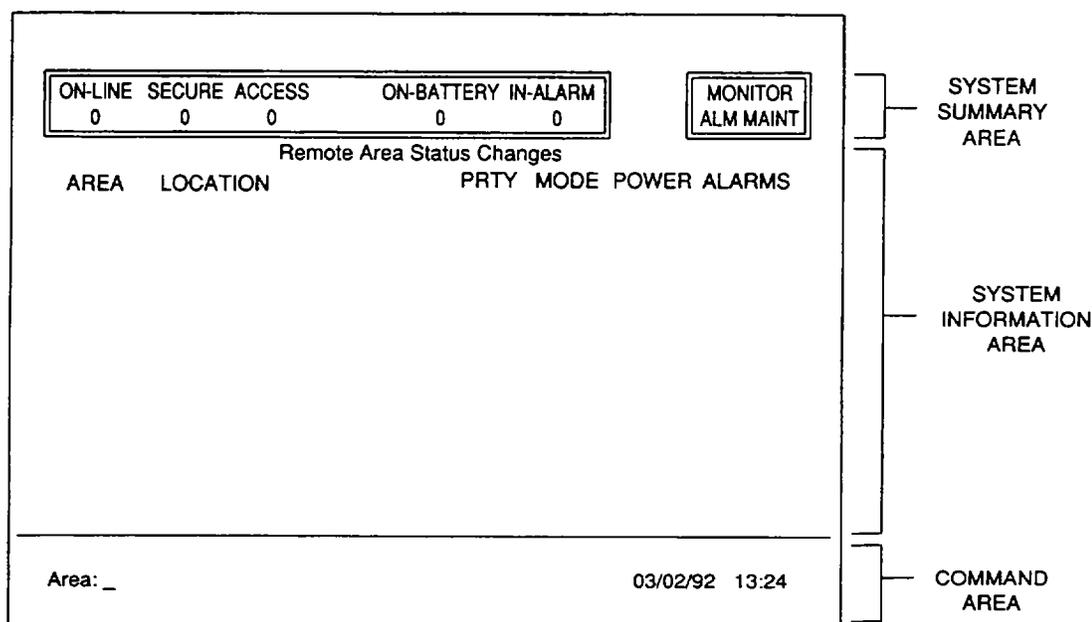


Figure 1-4. Secure Mode Screen Area

1.15.2 Secure Mode Screen Area. Each Secure Mode screen (figure 1-4) is divided into either two or three sections and the operator observes the Secure Mode screen to perform security tasks required by the indications of status changes. Each time J-SIIDS or AMG has a status change an audible alarm sounds which an operator must acknowledge. The audible alarm is silenced by pressing <Fl>. Also, a visual indication remains on the screen until the alarm is acknowledged. The operator then checks the system summary area of the displayed screen. The operator only uses limited keys from the keyboard as indicated by the template. Some Secure Mode screens also allow use of the number keys 1 through 0. The three sections which may appear on the screen are described in the following paragraphs and the Secure Mode screens are described in paragraphs 1.15.3 through 1.15.6.

1.15.2.1 System Summary Area. The system summary area (figure 1-5) is located at the top of each Secure Mode and Setup mode screen. It consists of two boxes and is always displayed on each screen. The system summary area is broken down into two sub groups. The two sub groups are the remote area summary and the monitor area summary.

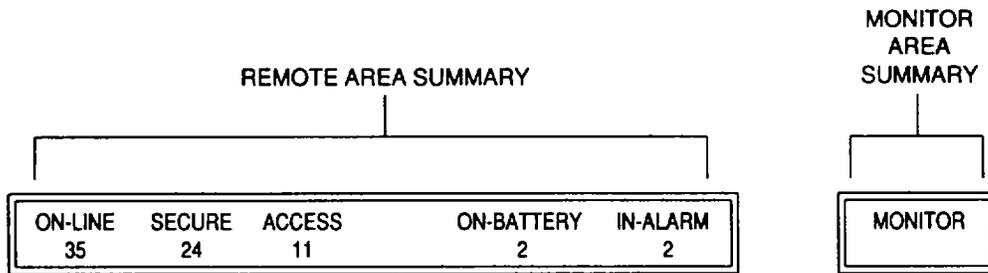


Figure 1-5 System Summary Area (Typical).

1.15.2.1.1 Remote Area Summary. The remote area summary provides a status of up to 64 remote areas. It is located at the top left hand of the screen. The number under the ON-LINE indicates the number of remote areas being monitored by the remote area transmitters. The number under the SECURE indicates the number of remote areas that are in secure mode. The number under the ACCESS the number of remote areas in the access mode. The number under ON-BATTERY indicates the number of remote areas that are on battery power. The number under IN-ALARM indicates the number of remote areas that are in alarm status.

1.15.2.1.2 Monitor Area Summary. The monitor area summary provides a summary of the AMG status. The summary indicates an alarm and/or maintenance function. When no alarms or maintenance is required, the Monitor Area Summary box is empty (nothing displayed).

1.15.2.2 System Information Area. The system information area is in the middle of the Secure Mode screen. Each of the Secure Mode screens has the system information area. The system information area provides information on either the remote monitored area or AMG. When a change in status occurs, the text associated with the changed status blinks until the change is acknowledged.

1.15.2.3 Command Area. The command area is at the lower part of the Secure Mode screen and is only on three of the four Secure Mode screens. The command area selects a remote area and displays area information. It can be used to select and display information about any remote monitored area. The remote area is selected by entering a number between 1 and 64 then pressing <ENTER> or moving the pointer to the area and pressing <ENTER>. When the number is displayed and <ENTER> has been pressed, the command area displays information for that remote area.

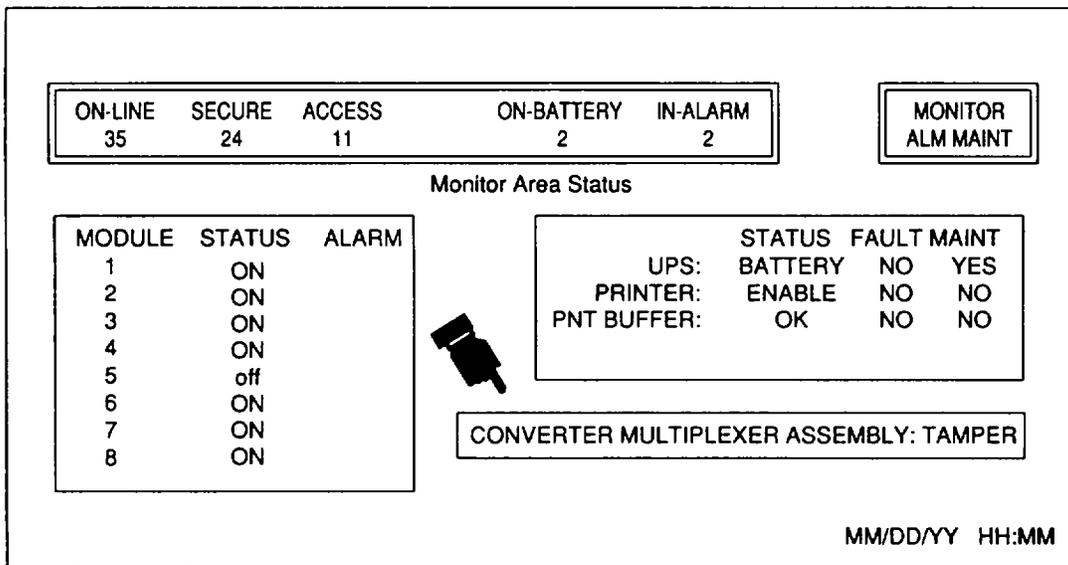


Figure 1-6. Monitor Area Status Screen (Typical).

1.15.3 Monitor Area Status Screen. The Monitor Area Status Screen (figure 1-6) displays information about the status of the AMG and is divided into two areas. It indicates the status of the eight modules and the alarm condition of the modules. It indicates the status of the tamper switches of the CMA and power status of the UPS. It also indicates the status of the printer and print buffer. The Monitor Area Status Screen is selected to acknowledge alarms or maintenance actions that occur in the MONITOR section of the system summary. After selecting the Monitor Area Status Screen, the only action required to acknowledge status changes is pressing <F1> and <F2> to reset cleared alarms.

1.15.3.1 Module Status Block. The module status block is located on the upper left hand side of the screen. The module status block is divided into three columns. The first column provides the associated module number. The second column provides the status of the module and is either "ON" or "off". The third column indicates either an alarm (ALM) or is blank. When the alarm can be reset, the ALM is displayed in lower case letters.

1.15.3.2 UPS and Printer Status Block. The UPS and printer status block is located at the upper right hand side of the screen. It is divided into four columns. The first column lists three items. The three items are the UPS, Printer and Print Buffer. The second column shows the status of the item listed in the first column. The status for the UPS is either "BATTERY" or "AC". The status for the printer is "ENABLED" "DISABLED" or "NOT RESP". The status for the PNT (printer) BUFFER is either "OK", "NEAR FULL", "FULL" or "DATA LOST". The third column provides fault information, "YES" for a fault and "NO" for no fault. The fourth column provides maintenance information. When maintenance is required or being performed, "YES" appears in this column. When the printer is functional, "NO" appears in this column.

1.15.3.3 Converter Multiplexer Assembly Status Block. The CMA status block is located on the lower right hand side of the screen. It indicates that the CMA has been opened and is controlled by an interlock change in the CMA. When the CMA has been opened, an alarm occurs and this box displays the word "TAMPER" on a red background with white text. If the CMA is closed or the tamper switch is in a maintenance position, the "TAMPER" is changed to lower case "tamper". The tamper alarm is reset by pressing <F2>.

ON-LINE 35					SECURE 24		ACCESS 11		ON-BATTERY 2		IN-ALARM 2		MONITOR ALM MAINT	
Remote Area Status														
AREA	PRTY	MODE	POWER	ALARMS	AREA	PRTY	MODE	POWER	ALARMS					
1	4	SEC	AC		17	4	ACC	AC						
2	4	SEC	AC		18	3	SEC	BAT						
3	4	SEC	AC		19	4	SEC	AC						
4	4	ACC	BAT		20	4	off							
5	4	off			21	4	off							
6	4	SEC	AC		22	4	off							
7	4	off			23	4	off							
8	4	off			24	4	SEC	AC						
9	4	ACC	AC		25	4	ACC	AC						
10	4	ACC	AC		26	4	SEC	AC						
11	4	SEC	AC		27	4	SEC	AC						
12	1	SEC	AC	ALM	28	4	SEC	AC						
13	4	SEC	AC		29	4	ACC	AC						
▶ 14 ◀	4	off			30	4	SEC	AC						
15	4	SEC	AC		31	4	off							
16	4	SEC	AC		32	4	SEC	AC						
33	Arms Room, Bldg. 748				1	ACC	BAT	ALM						
Area: _												MM/DD/YY HH:MM		

Figure 1-7. Remote Area Status Screen (Typical).

1.15.4 Remote Area Status Screen. The Remote Area Status Screen (figure 1-7) provides an overall view of the 64 remote areas. It is divided into three sections and allows selection of remote areas. It provides a listing of all the 64 remote areas with the status of each area. It consists of two pages (separate screens). Movement between the screen is controlled by using the <PgDn> (moves down one page) and <PgUp> (moves up one page) keys. Each page displays information about 32 of the remote areas being monitored. The screen provides the area number, the location of the area, the priority assigned the area, the type of power at the area, and the alarm condition of the area. The areas displayed by each page are as follows:

page 1 areas 1 through 32
page 2 areas 33 through 64

1.15.4.1 Area Column. The area column indicates the number assigned to the area. The areas are numbered from 1 to 64.

1.15.4.2 PRTY Column. The PRTY (priority) column indicates the selected priority of the area. The priority is a number from 1 to 4. The highest priority is represented by the number 1 and the lowest priority is represented by the number 4.

1.15.4.3 MODE Column. The MODE column indicates whether the area is secure or being accessed. If the area is not connected, "off" appears in the MODE column. When an area is selected the status of the area is displayed as either SEC (secure) in green text or ACC (access) in yellow text. If this display is white, the data is not valid because of communication failures or lack of communication. If COM (in red background with white text) or MOD (in white text by more than one area) alarms have occurred notify maintenance.

1.15.4.4 POWER Column. The POWER column indicates the type of power that the area is using to operate. The power is either the main power (AC) in green text or battery power (BAT) in yellow text. The normal power should be AC with BAT only appearing when a power failure has occurred in the area being monitored. If COM (in red background with white text) or MOD (in white text by more than one area) alarms have occurred notify maintenance.

1.15.4.5 ALARMS Column. The alarms column indicates the alarm status of the area. Communication failures (COM) and alarms (ALM) are displayed with a red background with white text. Module (MOD) failures are indicated by white text and are displayed by each area contained in the module. When an alarm occurs and is not acknowledged, the text in this column will be flashing. The text is either upper or lower case. The upper case indicates the alarm is still valid and lower case indicates the alarm has been cleared and ready to be reset. The text stops flashing when the alarm is acknowledged by selecting the area and then pressing the <F1> function key. When the alarm has been acknowledged and is displayed in lower case letters, it can be reset by pressing the <F2> function key. COM and ALM alarms are displayed on a red background with white text.

1.15.5 Remote Area Notes Screen. The Remote Area Notes Screen (figure 1-8) provides notes for the selected area and is divided into three sections. The area notes are entered during the setup mode by designated personnel. The notes give specific information that pertains to the selected area. Each of the 64 areas can be selected from the command line located at the bottom of the screen. Areas are selected by entering an area number between 1 and 64 on the command line and pressing enter. After the area is selected the notes for the selected area are displayed on the screen.

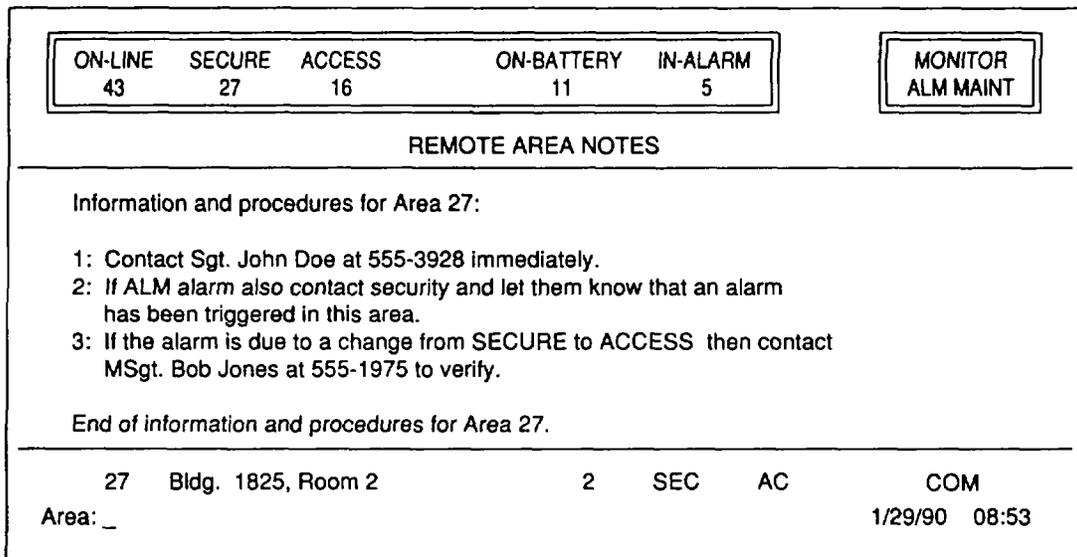


Figure 1-8. Remote Area Notes Screen (Typical).

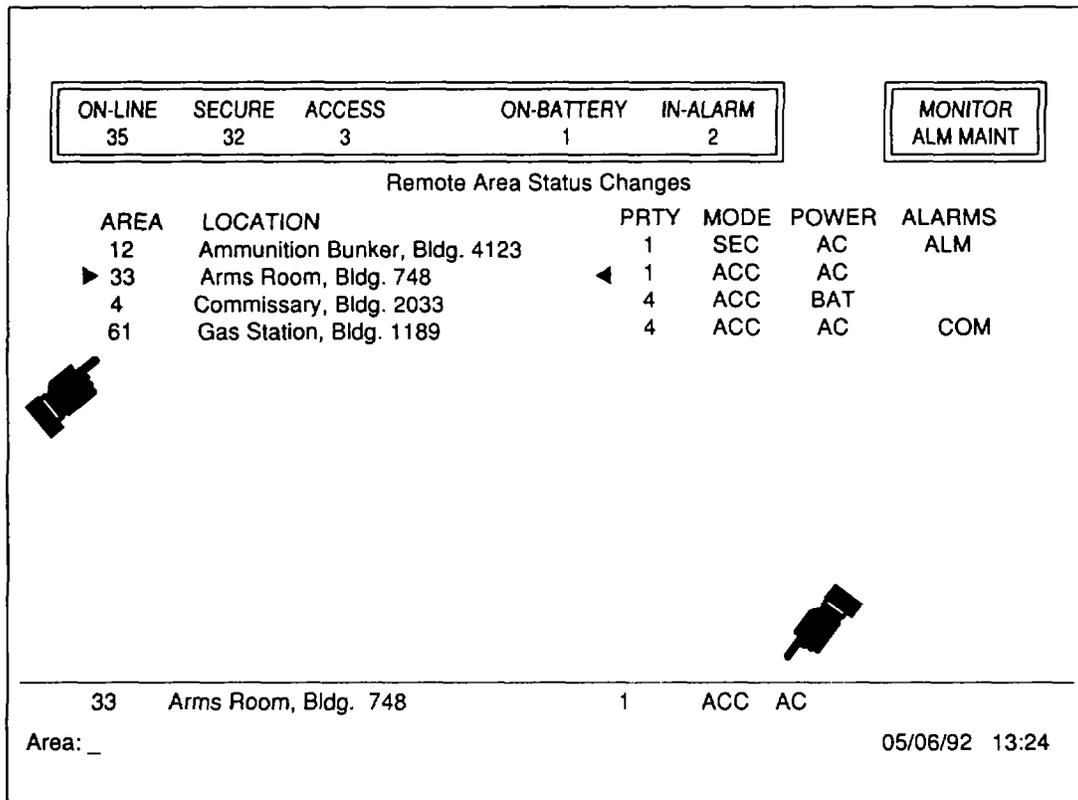


Figure 1-9. Remote Area Statue Changes Screen (Typical).

1.15.6 Remote Area Status Changes Screen. The Remote Area Status Changes Screen (figure 1-9) is divided into three sections. This screen provides the operator with the status information of the remote areas that have had a status change. Areas are selected by entering an area number between 1 and 64 on the command line and pressing enter. It can also be selected by moving the pointer to an area and pressing enter. It consists of up to four pages (separate screens). Movement between the screens is controlled by using the <PgDn> (moves down one page) and <PgUp> (moves up one page) keys. Each page displays information about 16 of the remote areas that have had status changes. The screen provides the area number, the location of the area, the priority assigned the area, the type of power at the area, and the alarm condition of the area. The screen displays all areas that have status changes. When alarms are cleared and reset, alarms are removed by the <ESC> key or when another area is selected. Status changes that are not alarms are removed by pressing the <Fl> key. The location column provides the description of the area. The description is also provided in the command line. The remaining columns are described in paragraphs 1.15.4.1 through 1.15.4.5

**CHAPTER 2
OPERATING INSTRUCTIONS**

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SECTION I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

2.1 OPERATOR CONTROLS AND INDICATORS.

The Alarm-Monitor Group (AMG) OA-9431/FSS-9(V) is controlled by a user furnished IBM-PC/AT compatible computer with a keyboard, color monitor and dot matrix printer. The operator controls and indicators can be divided into four groups which are the Uninterruptible Power Supply (UPS), Converter Multiplexer Assembly (CMA), computer, and J-SIIDs.

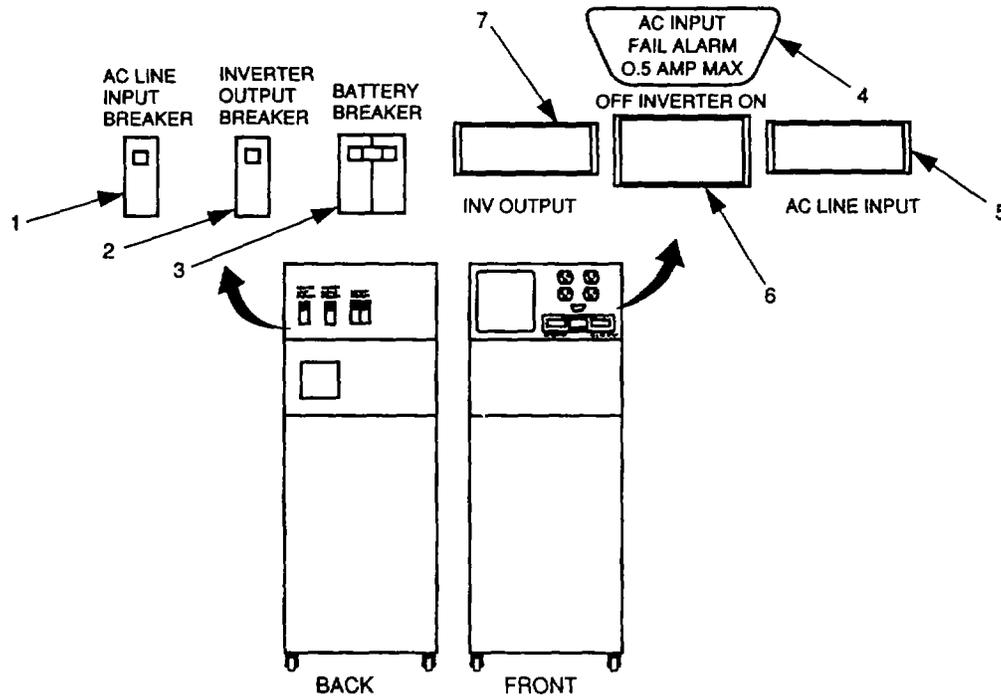


Figure 2-1. UPS Controls and Indicators.

2.1.1 Controls and Indicators UPS. The UPS (figure 2-1) provides the AC power for the CMA and computer. The UPS controls and indicators are listed with a description in table 2-1.

Table 2-1. UPS Controls and Indicators.

Item Number	Description	Function
1	AC LINE INPUT BREAKER	Switches main power input from on to off. When off, removes power from UPS input lines. Power is still available at input terminals. Provides current protection to UPS.
2	INVERTER OUTPUT BREAKER	Provides current protection. When current exceeds rated current, removes output power.
3	BATTERY BREAKER	Switches battery power from on to off. When on and ac power is not available, applies 72 V dc output from batteries to inverter until batteries decrease below 61 V dc.

Table 2-1. UPS Controls and Indicators (continued).

Item Number	Description	Function
4	AC INPUT FAIL ALARM .05 AMP MAX	Provides error signal to CMA.
5	AC LINE INPUT Indicator	When illuminated, indicates ac power available for UPS.
6	OFF INVERTER ON Switch	Removes ac input from the inverter.
7	INV OUTPUT Indicator	When illuminated, indicates power is available for CMA and computer.

2.1.2 Controls and Indicators CMA. The CMA has no operator controls or indicators.

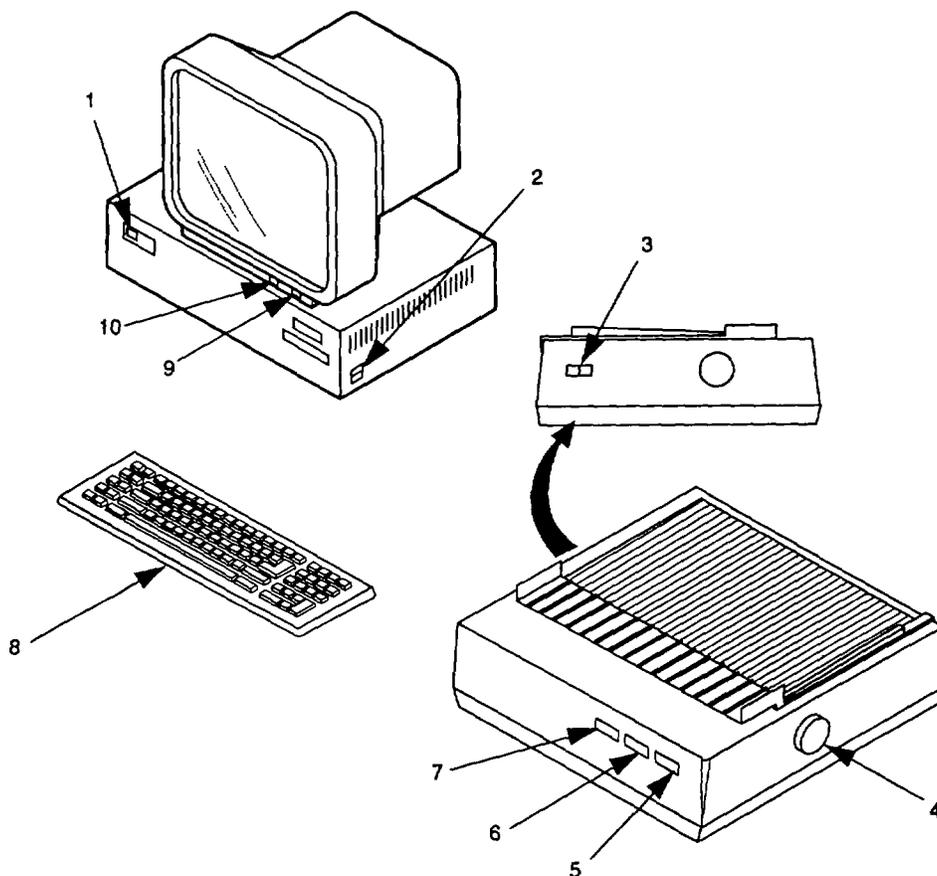


Figure 2-2. Computer Controls and Indicators (Typical).

2.1.3 Controls and Indicators IBM-PC/AT Compatible Computer. The computer (figure 2-2) provides the operational controls for the AMG. The controls and indicators for a typical computer are listed with a description in table 2-2. Refer to commercial manuals provided with the computer for a more detailed description and location. The computer, under the control of the application software, selects the display screens and operational modes as determined by the associated function key (figure 2-3). The two modes of operation for the AMG are the Secure Mode and Setup Mode. The Secure Mode is used by the operator and the Setup Mode is used by designated personnel.

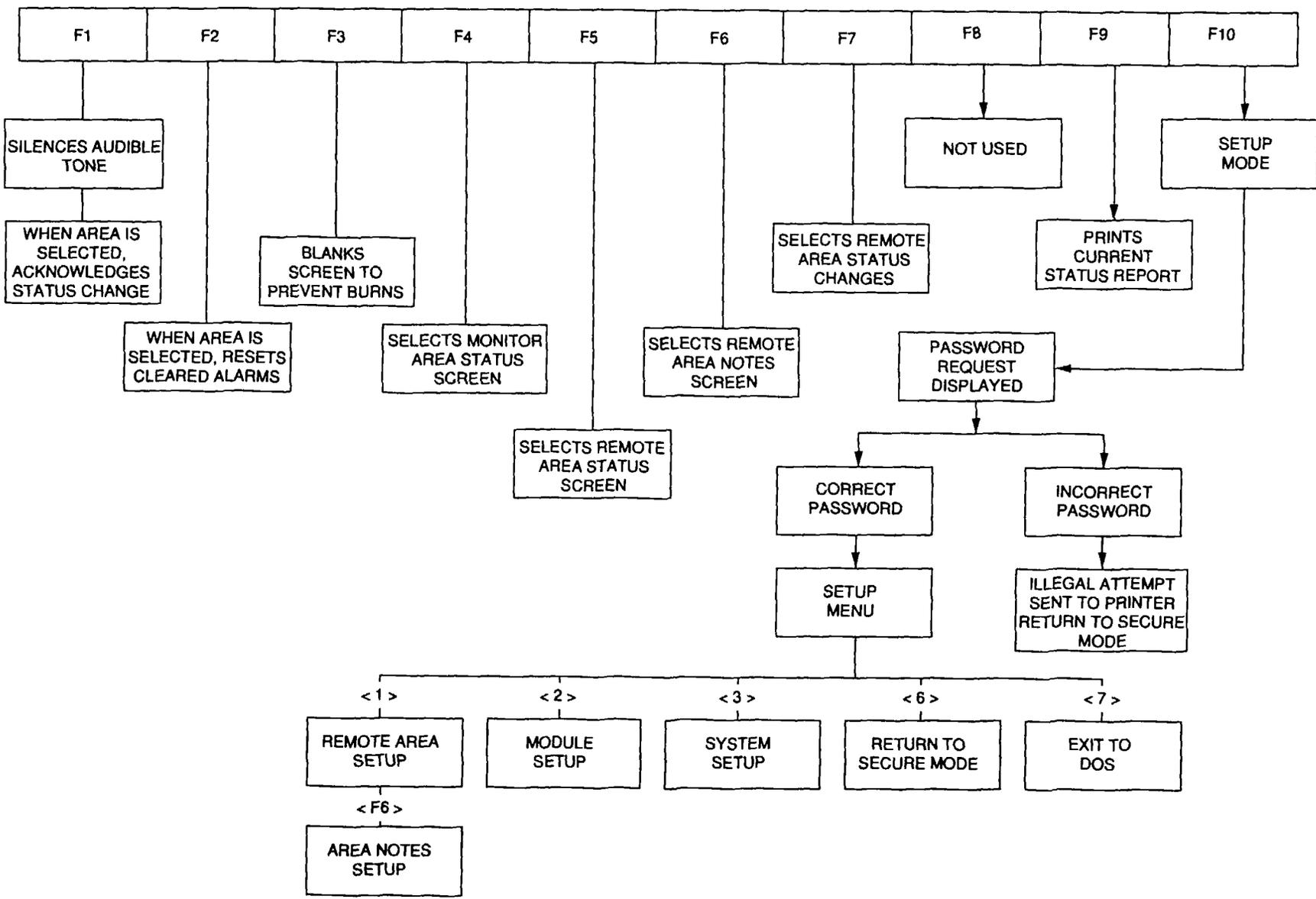


Figure 2-3. Function Key Assignments.

Table 2-2. Typical IBM-PC/AT Compatible Computer Controls and Indicators.

Item Number	Description	Function
1	Personal Computer Power On Indicator	When illuminated, indicates power is applied to personal computer.
2	Personal Computer Power ON/OFF switch	Provides input power for personal computer.
3	Printer Power ON/OFF switch.	Provides input power for printer.
4	Printer Paper Feed.	Provides paper feed to the printer.
5	Printer ON LINE/OFF LINE Switch.	Switch that places printer in ONLINE mode or OFFLINE mode.
6	ON LINE indicator	Indicates printer is online.
7	POWER ON indicator	Indicates power is on to printer.
8	Keyboard	Provides input and command keys for personal computer.
9	Monitor Power ON/OFF switch	Provides input power for monitor.
10	Monitor Power On Indicator	When illuminated indicates power is applied to monitor.

2.1.4 Controls and Indicators J-SIIDS. The J-SIIDS is used in *conjunction* with the AMG. Refer to the J-SIIDS TM 5-6350-250-14-1 for operation of the J-SIIDS.

SECTION II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2.2 GENERAL.

Preventive Maintenance Checks and Services (PMCS) is systematic caring, inspecting, and servicing of equipment to keep it in good operating condition. Always perform your PMCS, so it becomes a habit. Once you've had some practice, you will quickly spot anything wrong.

NOTE

Since the AMG is normally operated 24 hours per day, there is usually no operator PMCS performed. The AMG shall only be powered off in the event of an emergency that would result in equipment damage or when directed to do so by designated authorized personnel.

- a. Be sure to perform your PMCS when you power on the equipment. Pay attention to WARNINGS, CAUTIONS, and NOTES.
- b. Do your BEFORE PMCS just before you power on the equipment.
- c. Use DA Form 2404 (Equipment Inspection and Maintenance Worksheet) to record any faults that you discover before, during or after operation.

Your PMCS, table 2-3, lists inspections and care required to keep your equipment in good operating condition. It is set up so you can make your BEFORE (B) OPERATION checks as you walk around the equipment.

The "INTERVAL" column of table 2-3 tells you when to do a certain check or service.

2.2 **GENERAL.** (continued)

The "PROCEDURE" column of table 2-3 tells you how to do required checks and services. Carefully follow these instructions. If you do not have tools, or if the procedure tells you to, notify your supervisor.

NOTE

Terms "ready/available" and Omission capable" refer to the same status: Equipment is on hand and ready to perform its combat missions. (See DA Pam 738-750).

The "EQUIPMENT IS NOT READY/AVAILABLE IF:" column in table 2-3 tells you when your equipment is nonmission capable and why the equipment cannot be used.

If anything looks wrong and you can't fix it, write it on your DA Form 2404. IMMEDIATELY report it to your supervisor.

Table 2-3. Operator Preventive Maintenance Checks and Services for the AMG .

Item No.	Interval	Location	Procedure	Equipment Is Not Ready/ Available If:
		Item to Check/Service		
1	Before	<u>UPS</u>	Check that controls and indicators are not damaged. Check positive operation of switch.	UPS indicates no power available.
		Controls and indicators		
2	Before	Cabinet	Check cabinet for dents, damage or missing hardware (such as screws and other such items).	
3	Before	<u>Convertor Multiplexer Assembly</u>	Check cabinet for dents, damage or missing hardware (such as screws and other such items).	
		Cabinet		
4	Before	Drawer Assembly	Check for loose handles and dents.	
5	Before	<u>Computer</u>	Check for loose or damaged connectors at computer. Check for cable damage.	
		Cable Assembly, RS-485		
6	Before	<u>UPS</u>	Check for loose or damaged connectors at UPS. Check for cable damage.	
		Cable Assembly, UPS		

SECTION III. OPERATION UNDER USUAL CONDITIONS

2.3. ASSEMBLY AND PREPARATION FOR USE.

Assembly and preparation for use is performed by the maintenance and designated personnel. The designated personnel assigns the password in the Setup Mode. Returning to the Secure Mode configures the application software. To configure the application software for use, select the Setup mode as follows:

- a. When Remote Area Status Changes Screen of the Secure Mode screen appears, press <F10> and perform following:

NOTE

The application software is password protected. The software provided with system has a default password. The default password is "setup" in lower case letters. Since the AMG password is case sensitive, the word "setup" must be in lower case letters. After the software is setup, the new password must be used.

- b. Type <password> then press enter.
- c. When SETUP MENU of Setup Mode is displayed, select Module Setup as follows:
 - (1) Press <2> or down arrow key (,) to display Module Setup.
 - (2) Press <Enter>.

NOTE

To monitor any remote area within a module the module for that remote area must be turned on.

- d. When Module Setup screen appears, use arrow keys (1 and 1) to select modules. Press space bar to change status condition from off to on. Refer to table 1-2.
- e. Observe display and verify following:
 - (1) Status indication for selected modules are "ON".

NOTE

A "." in the "A4 CCAs" column of the module set up screen indicates that the data receiver CCA is not in communication with the central processing unit (CPU) CCA, not installed in the CMA, or is not properly installed in the CMA.

- (2) "YYYYYYYY" is displayed under heading "A4 CCA's" of each selected module.
- (3) Version number is displayed under heading "SOFTWARE VERSION" of each selected module.
- f. Press <Esc> key.
- g. When SETUP MENU is displayed, select remote area setup by pressing <Enter>.
- h. When Remote Area Setup appears, use the up and down arrow (1 and 1) keys to select the area for data entry.
- i. When each area is selected, enter data for selected area as follows:
 - (1) Use keyboard to enter title (30 characters) of location.
 - (2) Press <Tab> key and enter number between 1 and 4 for priority of area. Highest priority is 1 and lowest priority is 4.
 - (3) Press <Tab> key and press space bar to set mode.

2.3. ASSEMBLY AND PREPARATION FOR USE, (continued)**NOTE**

Space bar controls selection for MODE column and STATUS column. Mode column is toggled between "YES" (notifies operator of secure and access changes by beeping and flashing text) and "NO" (does not beep or flash text to notify operator of secure and access changes). STATUS column is toggled between "ON" (monitors the area, ONLINE) and "OFF" (does not monitor area).

- (4) Press <Tab> key and press space bar to set status.
- (5) Press <F6>.to enter area notes and information.

NOTE

Only a type over function is provided. In addition, ASCII II characters can be used to enter graphic boxes. Refer to manuals provided with personal computer for ASCII II numbers. Enter ASCII characters by holding down ALT key and entering associated ASCII II number on the keypad with <Num Lock > off for character desired.

- (6) Use keyboard to enter area notes and information (maximum one screen per area).
 - (7) Press <Esc>.
 - (8) Repeat steps i, (1) through i.(7) for each area to be monitored.
 - (9) Press <Esc>.
- j. When SETUP MENU is displayed, configure system as follows:
- (1) Either press <3> or press down arrow (Jo) to highlight "System Setup".
 - (2) Press <Enter>.
- k. When System Setup appears, use up and down arrow (T and 1) keys to select item for data entry.
- l. Select items for configuration as follows:
- (1) Select the security display sorting method by pressing space bar.

<ul style="list-style-type: none"> •Priority only •Alarms, then Priority 	<p>This displays the list of status changes and alarms by priority.</p> <p>This displays the alarms in order of occurrence then priority.</p>
--	---
 - (2) Press down arrow key (J) to highlight "Status Report Printing".
 - (3) Select method of printing status reports by pressing space bar. Status reports can be printed by specifying times or intervals.

<ul style="list-style-type: none"> •XX:XX XX:XX XX:XX •Every X Hours starting at XX:XX •Every Hour starting at XX:XX 	<p>Selects time intervals in increments of 10 minutes and prints current status report during the selected time.</p> <p>Selects an hourly time interval from time entered and prints current status report at the selected hourly time interval.</p> <p>Current Status Report is printed every hour from the time entered.</p>
---	--

Change 1 2-8

None Automatic

Does not automatically print status report. The function key F9 must be pressed to obtain a status report. This is the method recommended.

NOTE

Printer should always be enabled.

- (4) Press down arrow key (1) to highlight "Change Password".



When the password is highlighted, it will be changed by striking any letter or number key on the keyboard. Ensure that any changes made to the password have been recorded in accordance with standard security procedures. Failure to observe this caution could result in changing the password and making it impossible to access the Setup Mode from the Secure Mode. The password is case sensitive and can be mixed upper and lower case,

NOTE

- When the application software is first configured, you must change the default password "setup" in lower case letters to a new password. The password should then be changed as required by individual commands.

- The AMG program must return to the secure mode for the new password to be saved.

- (5) Change password as required.
 (6) Press down arrow key (,) to highlight "Change Date/Time".
 (7) Enter correct time and date as required.
 (8) Press <Esc>.

- m. When SETUP MENU is displayed, exit setup menu as follows:



When the application software is returned to the Secure Mode, any changes made to the password will be changed in the configuration files. Ensure that any changes made to the password have been recorded in accordance with standard security procedures. Failure to observe this caution could result in changing the password and making it impossible to access the Setup Mode from the Secure Mode.

- (1) Press <6> or down arrow key (2) until Return to Security Mode is highlighted.
 (2) Press <Enter>.
 (3) Press F10 and return to setup mode.
 (4) Press <7> or down key (l) until exit to DOS is highlighted.
 (5) Press <Enter>.
 (6) Copy all files from the AMG subdirectory of the hard drive to diskette for backup.

2.4. HARDWARE OPERATING PROCEDURES.

2.4.1 Power On.



Should equipment/system fail for any reason do not power on until maintenance has been notified. Failure to observe this caution could result in equipment damage.

- a. At the UPS, refer to figure 2-1 and perform the following:
 - (1) Set the UPS AC LINE INPUT BREAKER to ON.
 - (2) Observe UPS AC LINE INPUT indicator is illuminated.
 - (3) Set UPS BATTERY BREAKER to ON.
 - (4) Set UPS INVERTER OUTPUT BREAKER to ON.
 - (5) Depress "OFF INVERTER ON" switch to ON.
 - (6) After 2 seconds, observe UPS INV OUTPUT indicator illuminates.

- b. At the computer, refer to the manuals provided with the computer and figure 2-2 then perform the following:
 - (1) Load paper in printer if required.
 - (2) Apply power to computer.
 - (3) Ensure computer power is on.
 - (4) Apply power to monitor.
 - (5) Observe that power indicator for monitor is illuminated.
 - (6) Apply power to printer.
 - (7) Observe that power indicator for printer is illuminated.

- c. Press <F5> to select the Remote Area Status screen. Observe screen until all remote areas being monitored are green.

2.4.2 Shutting Down AMG.

Perform the following procedures:

- a. At the computer, refer to the manuals provided with the computer and figure 2-2 then perform the following:
 - (1) Remove power from printer.

NOTE

When printer is turned off, audible alarm will sound and MAINT function will be indicated.

- (2) Observe that power indicator for printer is not illuminated.
- (3) Remove power from monitor.
- (4) Observe that power indicator for monitor is not illuminated.

- (5) Remove power from computer.
- (6) Observe that power indicator for computer is not illuminated.
- (7) Remove paper from printer as required.

b. At the UPS, refer to figure 2-1 and perform the following:

NOTE

When the UPS AC LINE INPUT breaker is set to off, an audible alarm will sound.

- (1) Set the UPS AC LINE INPUT breaker to OFF.
- (2) Set UPS INVERTER OUTPUT BREAKER TO OFF.
- (3) Set UPS BATTERY BREAKER to OFF.
- (4) Observe UPS AC LINE INPUT and INV OUTPUT indicators are not illuminated.

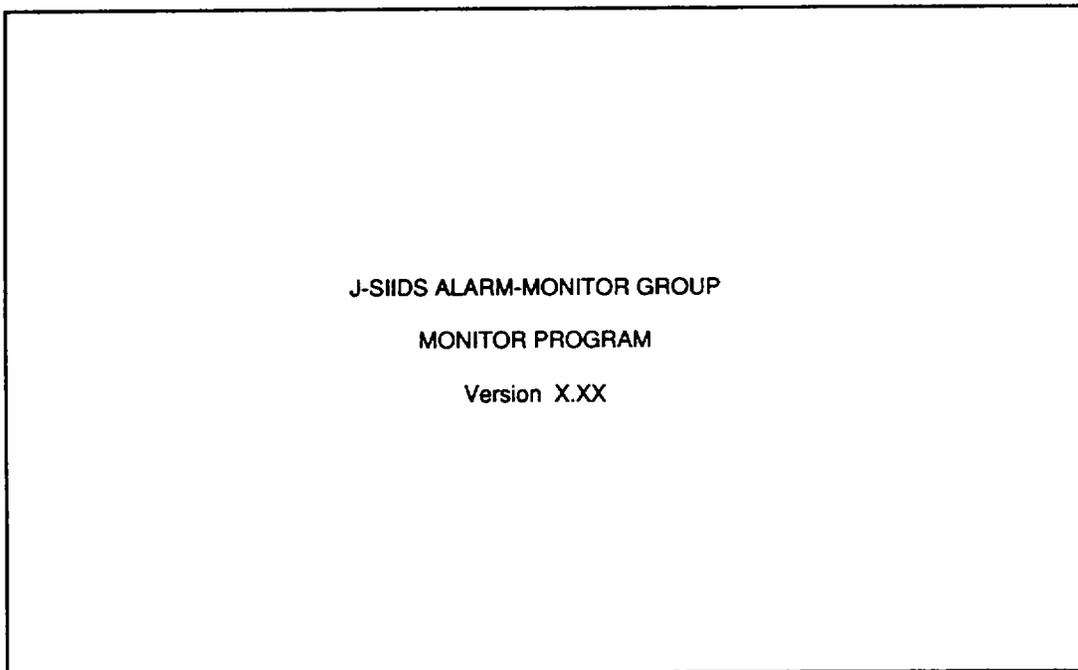


Figure 2-4. Initialization Screen (Typical).

2.5 SOFTWARE OPERATING PROCEDURES AND INFORMATION.

The AMG is a software driven monitoring system requiring an IBM-PC/AT compatible computer. The application software provides two modes of operation which are the Secure Mode and Setup Mode.

2.5.1 Secure Mode. The Secure Mode is the mode of operation. It provides four screens that are used to display information. Each screen displays a summary of

the system status and is described in paragraph 1.15.2. The screens are selected by pressing the associated function key as follows:

<F4>	:	Monitor Area Screen
<F5>	:	Remote Area Status
<F6>	:	Remote Area Notes Screen
<F7>	:	Remote Area Status Changes Screen

2.5.2 Secure Mode Screen Selection. Each screen displays information that can be used by the operator or supervisor and is divided into sections. Each action by an operator either results in a valid function or error message in yellow text at the bottom of the screen. Error messages that occur can only be cleared by performing a valid action. The error messages are written in plain English and inform the operator that the attempted action is not valid. For example: When the function key associated with the displayed screen is pressed, the error message 'That Screen is Already Displayed' is displayed. Similar messages are displayed for other invalid actions and do not interfere or alter the operation of the AMG.

2.5.2.1 Remote Area Screens. The remote area screens consist of the Remote Area Status Changes Screen, Remote Area Notes Screen, and Remote Area Status Screen. The detailed description of the remote area screens is provided in paragraphs 1.15.4 through 1.15.6. The operator selects the Remote Area Status Changes Screen to display remote areas with status changes. The operator selects the Remote Area Notes Screen to find out information about the selected area. The operator selects the Remote Area Status Screen to find out the status of all the 64 possible areas.

2.5.2.2 Monitor Area Status Screen. The Monitor Area Status Screen provides status information for the AMG equipment. The detailed description of the Monitor Area Status Screens is provided in paragraph 1.15.3. When the status change is associated with the AMG, the operator selects this screen and presses <F1> to acknowledge and <F2> to reset cleared alarms.

2.5.3 Status Changes. Remote area status changes are displayed on the Remote Area Status Changes screen. AMG status changes are displayed on the Monitor Area Screen. Alarms are displayed as white text for active and grey text for cleared on a red background. Active alarms are displayed in capital letters and cleared alarms are displayed in lower case letters. In addition, the Systems Summary Area is updated to indicate the total number of areas in access, secure, alarm, on ac power, or on battery power. Until status changes for the area are acknowledged, the text is flashing. When status changes have been acknowledged, the status changes stop flashing. When cleared, alarms (ALM or COM) can be reset by pressing <F2>. AC Power, BAT, ACC, and SEC status changes do not need to be reset. AC power and SEC are displayed in green text. BAT and ACC are displayed in yellow text.

2.5.4 Keyboard Operational Keys. The keyboard is the interface between an operator and AMG. The operator uses selected keys from the keyboard to react to various prompts from the AMG. Templates (figure 2-5) are provided for two styles of keyboards. Table 2-4 provides a listing of all the operational keys. Minimal operating procedures are provided in paragraph 2.5.5. The operation from the keyboard is as follows:

- Silence audible alarm by pressing <F1>.
- Acknowledge status changes by selecting the remote area or selecting the Monitor Area Status Screen and pressing <F1>.
- Reset cleared alarms by selecting the remote area or Monitor Area Status Screen and pressing <F2>.
- Select various screens by pressing the associated function key (<F4>, <F5>, <F6> or <F7>).
- Select remote monitored areas by entering a number between 1 and 64 on the command line and pressing <ENTER>.
- Obtain information from remote area notes by pressing <F6>.
- Print current status report by pressing <F9>.
- Blank the monitor screen by pressing <F3> (Screen will not blank if there are unacknowledged status changes or cleared alarms that have not been reset).

Key on Keyboard	Remote Area Status Changes Screen	Remote Area Status Screen	Remote Area Notes Screen	Monitor Area Status Screen	Remarks
<F1>	Silences audible tone and allows status change to be acknowledge.	Silences audible tone and allows status change to be acknowledge.	Silences audible tone and allows status change to be acknowledge.	Silences audible tone and allows status change to be acknowledge.	Operator uses this key to silence audible tone and acknowledge status changes. When first pressed, audible tone is silenced. After area with status change is selected, acknowledges status change.
<F2>	Resets alarm.	Resets alarm.	Resets alarm.	Resets alarm.	When alarm indication is in lower case letters, resets alarm.
<F3>	Blanks screen.	Blanks screen.	Blanks screen.	Blanks screen.	Allows operator to blank screen. This feature prevents monitor screen from becoming burned. Screen unblanks automatically when a status change occurs and cannot be blanked with unacknowledged status changes. Screen is unblanked by pressing any key.
<F4>	Selects Monitor Area Screen.	Selects Monitor Area Screen.	Selects Monitor Area Screen.	Displays error message.	
<F5>	Selects Remote Area Status Screen.	Displays error message.	Selects Remote Area Status Screen.	Selects Remote Area Status Screen.	
<F6>	Selects Remote Area Notes Screen.	Selects Remote Area Notes Screen.	Displays error message.	Selects Remote Area Notes Screen.	
<F7>	Displays error message.	Selects Remote Area Status Changes Screen.	Selects Remote Area Status Changes Screen.	Selects Remote Area Status Changes Screen.	
<F8>	Displays error message.	Displays error message.	Displays error message.	Displays error message.	
<F9>	Prints status report.	Prints status report.	Prints status report.	Prints status report.	Prints only current status report of remote areas and AMG.

Table 2-4. Keyboard Commands.

Key on Keyboard	Remote Area Status Changes Screen	Remote Area Status Screen	Area Notes Screen	Monitor Area Status Screen	Remarks
<F10>	Selects Setup Mode.	Selects Setup Mode.	Selects Setup Mode.	Selects Setup Mode.	This mode is only used by authorized supervisory personnel during installation and as required for security updates. Any attempt to access this feature is printed.
→ (right arrow key)	Displays error message.	Moves pointer to other column.	Displays error message.	Displays error message.	
← (left arrow key)	Displays error message.	Moves pointer to other column.	Displays error message.	Displays error message.	
↑ (up arrow key)	Moves pointer up one line.	Moves pointer up one line.	Displays error message.	Displays error message.	When no areas are displayed, pointer is not displayed. If only one area is displayed, pointer does not move.
↓ (down arrow key)	Moves pointer down one line.	Moves pointer down one line.	Displays error message.	Displays error message.	See remarks for ↑ (up arrow key).
Page Down	Display next 16 areas.	Display next 32 areas.	Displays error message.	Displays error message.	AMG monitors up to 64 areas. The Remote Area Status Screen provides the status of all 64 areas and has two screens. When more than 16 areas are displayed on Remote Area Status Changes Screen, additional screens are used. Each screen provides status on up to 16 areas for Remote Area Status Changes Screen or 32 areas for Remote Area Status Screen.
Page Up	Display previous 16 areas.	Display previous 32 areas.	Displays error message.	Displays error message.	See remarks for Page Down.

2-14

Table 2-4. Keyboard Commands (continued)

Key on Keyboard	Remote Area Status Changes Screen	Remote Area Status Screen	Area Notes Screen	Monitor Area Status Screen	Remarks
Home	Moves pointer to top of screen.	Moves pointer to top of screen.	Displays error message.	Displays error message.	When pointer is at top of screen, error message is displayed.
End	Moves pointer to bottom of screen.	Moves pointer to bottom of screen.	Displays error message.	Displays error message.	When pointer is at bottom of screen, error message is displayed.
##*	Enters number between 1 and 64.	Enters number between 1 and 64.	Enters number between 1 and 64.	Displays error message.	Use number keys 0 through 9 to enter numbers between 1 and 64. Numbers greater than 64 result in error messages.
+	Selects area below current selected area in accordance to the Remote Area Status Changes Screen.	Selects area below current selected area, in accordance to the Remote Area Status Changes Screen.	Selects area below current selected area in accordance to the Remote Area Status Changes Screen.	Displays error message.	The only areas that are selected will be displayed on the Remote Area Status Changes screen.
-	Selects area above current selected area in accordance to the Remote Area Status Changes Screen.	Selects area above current selected area in accordance to the Remote Area Status Changes Screen.	Selects area above current selected area in accordance to the Remote Area Status Changes Screen.	Displays error message.	See remarks for the + key.
Enter	Selects area or password.	Selects area or password.	Selects area or password.	Selects Password.	Password is invoked by pressing <F10>.
Esc	Clears area or password.	Clears area or password.	Clears area or password.	Clears password.	Password is invoked by pressing <F10>.
Back space	Deletes character to left.	Deletes character to left.	Deletes character to left.	Displays error message or deletes character to left of password.	
Ctrl and Home	Moves pointer to first listed area.	Moves pointer to area 1.	Displays error message.	Displays error message.	
Ctrl and End	Moves pointer to last listed area.	Moves pointer to area 64.	Displays error message.	Displays error message.	
Shift	Used to type upper case letters for password.	Used to type upper case letters for password.	Used to type upper case letters for password.	Used to type upper case letters for password.	Shift key can be used to type numbers from the keypad at the right hand side of the keyboard.

* The ## represents any number between 1 and 64.

RESPONSE		Remote Area Display						Administration	
ACK	RESET	Blank Screen	Monitor Area Screen	All Area Status	Selected Area Notes	Status Changes List		Print Status Report	Enter Setup Mode
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10

Enhanced 101 Keyboard

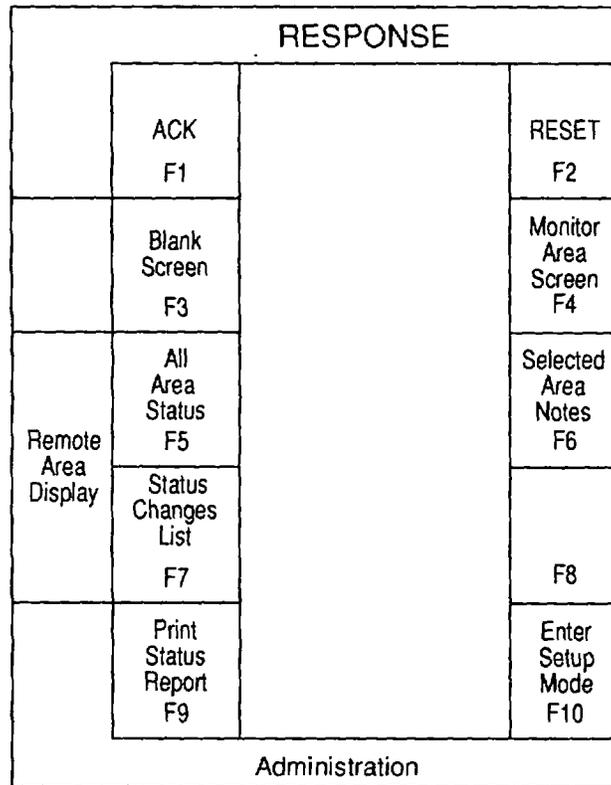


Figure 2-5. Keyboard Templates (typical).

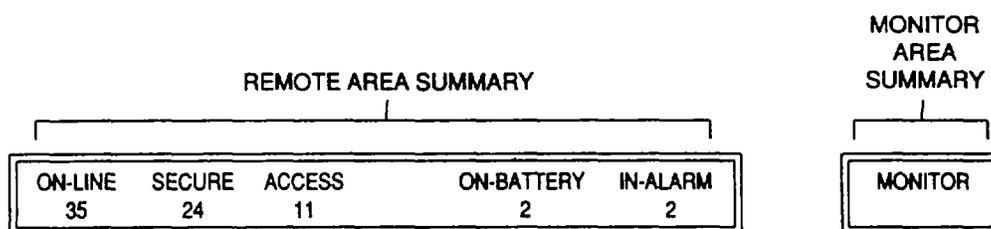


Figure 2-6 System Summary Area (Typical).

2.5.5 Basic ANG Operation. When required, refer to paragraph 2.4.1 and power on the AMG.

NOTE

- When the AMG program is started, an initialization screen appears. This screen is displayed only during program initialization. When the program is loaded, the screen automatically clears to the Remote Area Status Changes Screen.
 - The audible alarm only requires to be silenced once for all status changes that have occurred. Any status changes occurring after silencing will cause the alarm to sound again.
- a. When an audible alarm sounds, Press <F1> to silence audible tone.
 - b. Check the System Summary Area (figure 2-6) for the type of status change. When the status change has occurred in a remote monitored area, proceed to step c. If the status change is indicated in the monitor area proceed to step j. Any communications (COM) alarms should be reported to maintenance.
 - c. Press <F7> to ensure 'Remote Area Status Changes Screen' is displayed.
 - d. Observe screen for flashing text. Select area flashing with highest priority by entering the area number on the command line and press <ENTER>.
 - e. Press <F6> to select Remote Area Notes screen and follow instructions for type of alarm or status change.
 - f. Press <F1> to acknowledge each alarm.
 - g. Repeat steps c through f for any remaining remote alarms.
 - h. Press <F7> to select Remote Area Status screen.

NOTE

- When remote area alarm has been cleared it will change to lower case.
 - Selected area is displayed in command area.
- i. When alarm is in lower case letters, reset area as follows:
 - (1) Select area.
 - (2) Press <F2> to reset alarm.
 - (3) Repeat this step as remaining alarms change to lower case.
 - j. When AMG status change occurs, press <F4> to select Monitor Area Status screen. Press <F1> to acknowledge all status changes.
 - k. Observe type of alarm or maintenance action required. Refer to chapter 3 for maintenance.

2.5.6 Setup Mode of Operation. The Setup Mode is only used by designated personnel that have access to the password. The setup mode is used to setup or change the configuration file of the AMG software. Access to the Setup is provided by pressing <F10>. When <F10> is pressed, a prompt for password is displayed in the command area. After the password prompt is accessed, either enter the correct password or press the <Esc> key. Do not attempt to enter a password unless you are authorized to do so. If the wrong password is typed and <ENTER> is pressed, the time, date, and illegal attempt to gain access is printed on the status report to the printer. Each illegal attempt is recorded. When a correct password is typed and <Enter> is pressed, access to the setup menus is granted. Detailed instructions for initializing setup are contained in paragraph 2.3. To make changes after initialization enter the correct password and perform steps c. through m. of paragraph 2.3.

2.6 DECALS AND INSTRUCTION PLATES.

■ The decals, labels, and identification plates are shown in Figure 2-7 thru Figure 2-10.

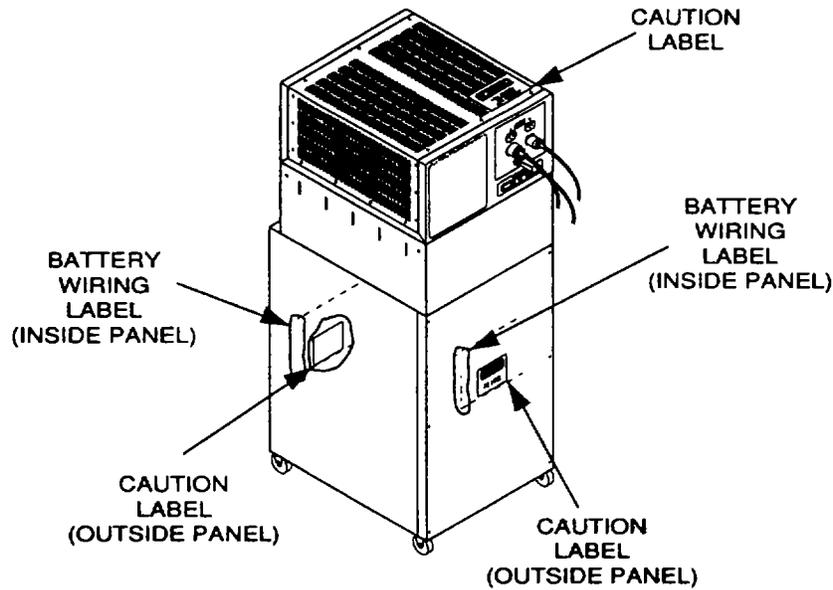
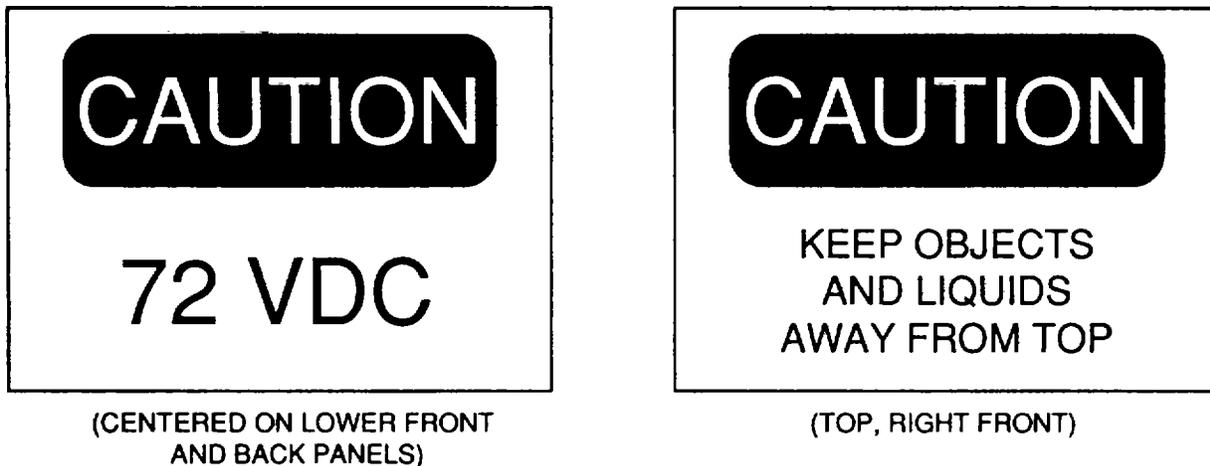


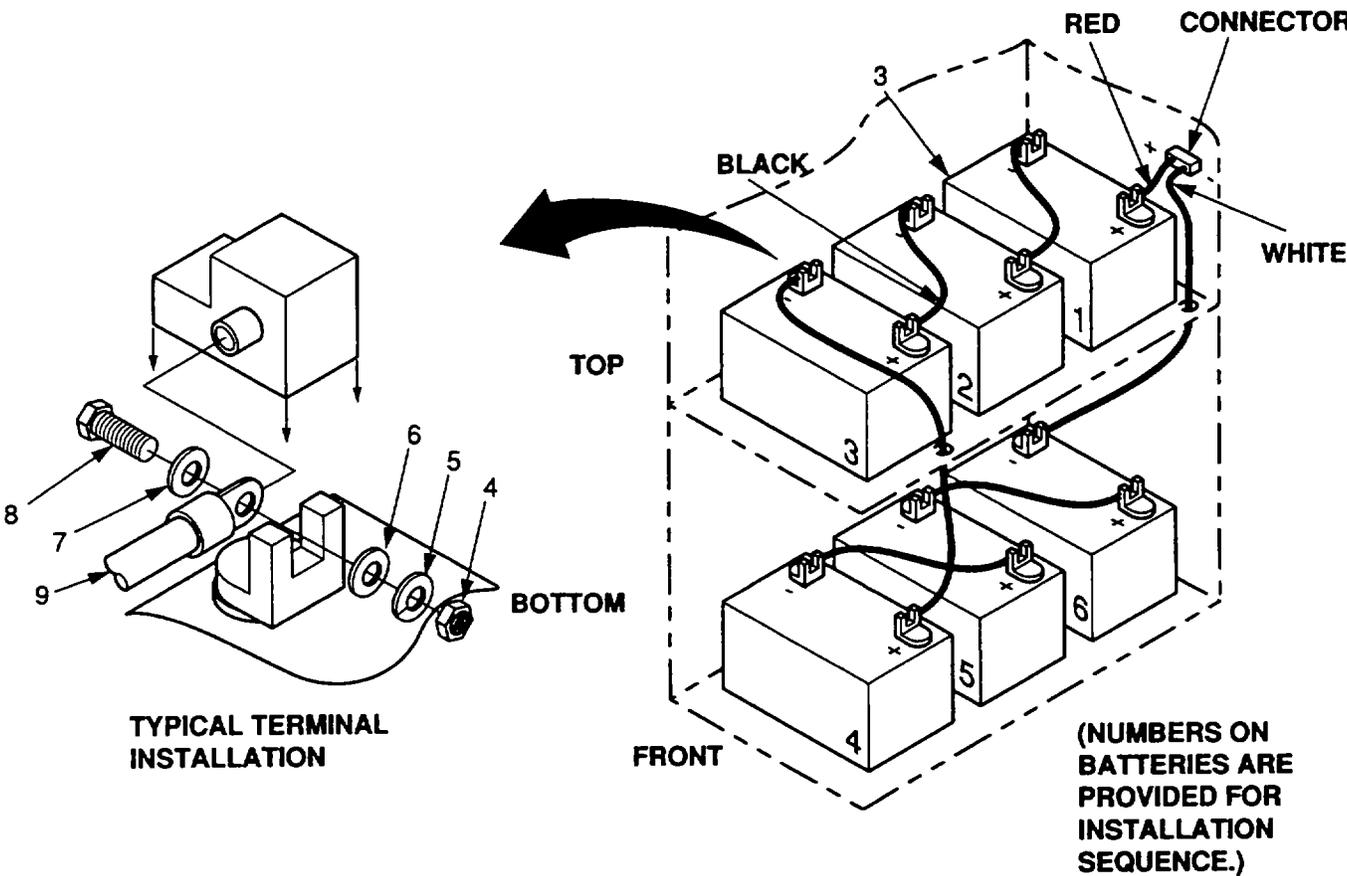
Figure 2-7 Location of UPS Labels.



(CENTERED ON LOWER FRONT AND BACK PANELS)

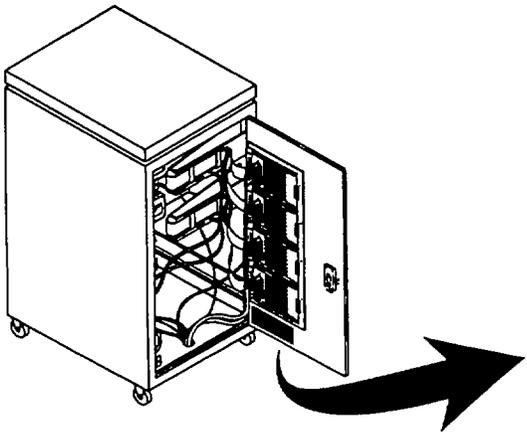
(TOP, RIGHT FRONT)

Figure 2-8. Caution Labels on UPS.



CAUTION
BATTERIES - 77 LBS EACH
USE 2 PERSONS TO LIFT

Figure 2-9. UPS Battery Label.



CONVERTER MULTIPLEXER ASSEMBLY			
CONTR NO.	62060		
S N	003	MOD	
MFG DATE	5/93	57865	CAGE CODE
NSN			
PN 97403-	13229E8140		

Figure 2-10. CMA Identification Plate (Typical).

SECTION IV. OPERATION UNDER UNUSUAL CONDITIONS**2.7 UNUSUAL ENVIRONMENTAL/WEATHER CONDITIONS.**

There are no unusual environmental or weather operation conditions of the AMG. Refer to the J-SIIDs TM 5-6350-264-14 series for emergency procedures for the J-SIIDs system.

2.8 EMERGENCY PROCEDURES.

There are no emergency procedures for the AMG. Refer to the J-SIIDs TM 5-6350-264-14 series for emergency procedures for the J-SIIDs system.

2.9 NUCLEAR, BIOLOGICAL. AND CHEMICAL (NBC) DECONTAINATION.

There are no requirements for NBC procedures with the OA-9431/FSS-9(V).

CHAPTER 3

OPERATOR MAINTENANCE INSTRUCTIONS

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SECTION II TROUBLESHOOTING.....	3-1
3.2 TROUBLESHOOTING.....	3-1
SECTION III MAINTENANCE PROCEDURES.....	3-1
3.3 MAINTENANCE.....	3-1

SECTION I. LUBRICATION INSTRUCTIONS

3.1 LUBRICATION.

Lubrication is not required for the AMG.

SECTION II. OPERATOR TROUBLESHOOTING

3.2 TROUBLESHOOTING.

There is no operator troubleshooting.

SECTION III. OPERATOR MAINTENANCE PROCEDURES

3.3 MAINTENANCE.

Operator maintenance is limited to a visual inspection of power cords and switches for the AMG. Refer to the commercial manuals provided with computer for maintenance and servicing of the computer. All other maintenance actions that may be required shall be reported to your supervisor.

Change 1 3-1/(3-2 Blank)

**APPENDIX A
REFERENCES**

A-1 SCOPE.

Appendix A lists publications that are related to the equipment. Since publications are updated, the military publication indexes listed in this paragraph should be consulted frequently for latest changes or revisions of references given relating to material covered in this publication.

Military Publication Indexes.

Consolidated Index of Army Publications and Forms..... DA PAM 25-30

A-2 FORMS.

Refer to DA PAM 738-750, the Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to the equipment.

Recommended Changes to Publications and Blank Forms..... DA Form 2028
 Recommended Changes to Equipment Technical Publications DA Form 2028-2
 Product Quality Deficiency Report..... SF 368

A-3 TECHNICAL MANUAL.

The following technical manuals contain information pertinent to the equipment.

Installation, Operation and Checkout Procedures TM 5-6350-264-14-1
 Transceiver, Ultrasonic Signal and Processor,
 Ultrasonic Motion Detector..... TM 5-6350-264-14&P-2
 Receiver Passive Signal, Ultrasonic and Processor,
 Passive Signal, Ultrasonic TM 5-6350-264-14&P-3
 Detector, Vibration Signal and Processor,
 Vibration Signal TM 5-6350-264-14&P-4
 Switch Balanced Magnetic..... TM 5-6350-264-14&P-5
 Sensor, Grid Wire..... TM 5-6350-264-14&P-6
 Sensor, Capacity Proximity TM 5-6350-264-14&P-7
 Switch, Alarm Latching..... TM 5-6350-264-14&P-8
 Alarm, Audible..... TM 5-6350-264-14&P-9
 Control Unit, Alarm Set..... TM 5-6350-264-14&P-10
 Cabinet, Monitor, Type A, Type B, Type C and Monitor
 Module, Status Monitor TM 5-6350-264-14&P-11
 Receiver, Data and Transmitter, Data..... TM 5-6350-264-14&P-12
 Sensor, Magnetic Weapons (DT-547)..... TM 5-6350-264-14&P-13
 Selection and Application of Joint Services Interior
 Intrusion Detection System TB 5-6350-264
 Unit and Direct Support Maintenance Manual Including
 Repair Parts and Special Tools List, Alarm-Monitor
 Group (AMG) OA-9431/FSS-9(V) CAGEC 97403 TM 5-6350-280-23&P
 Procedures for Destruction of Equipment to
 Prevent Enemy Use (Mobility Equipment Command) TM 750-244-3

A-4 ARMY REGULATIONS.

The following Army Regulations contain information pertinent to the equipment.

Dictionary of United States Army Terms..... AR-310-25

A-5 MILITARY STANDARDS.

The following military standards contain information pertinent to the equipment.

Abbreviations for Use On Drawings and in Specifications, Standards
and Technical Documents.....MIL-STD-12

A-6. FIELD MANUAL

The following field manuals contain information pertinent to the equipment:

Physical SecurityFM 1930

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**APPENDIX B
COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS**

SECTION I. INTRODUCTION

B-1 SCOPE.

This appendix lists components of the end item and basic issue items for the Alarm-Monitor Group (AMG) to help you inventory the items for safe and efficient operation of the equipment.

B-2 GENERAL.

The Components of End Item (COEI) and Basic Issue Items (BII) Lists are divided into the following sections:

B-2.2 Section II. Components of End Item. This listing is for information purposes only, and is not authority to requisition replacements. These items are part of the Alarm-Monitor Group (AMG). As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

B-2.2 Section III. Basic Issue Items. These essential items are required to place the AMG in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the AMG during operation and when it is transferred between property accounts. This list is your authority to request/requisition them for replacement based on authorization of the end item by the Table of Distribution Allowances (TDA). Illustrations are furnished to help you find and identify the items.

B-3 EXPLANATION OF COLUMNS.

B-3.1 Column (1). The first column, Illus Number, gives you the number of the item illustrated.

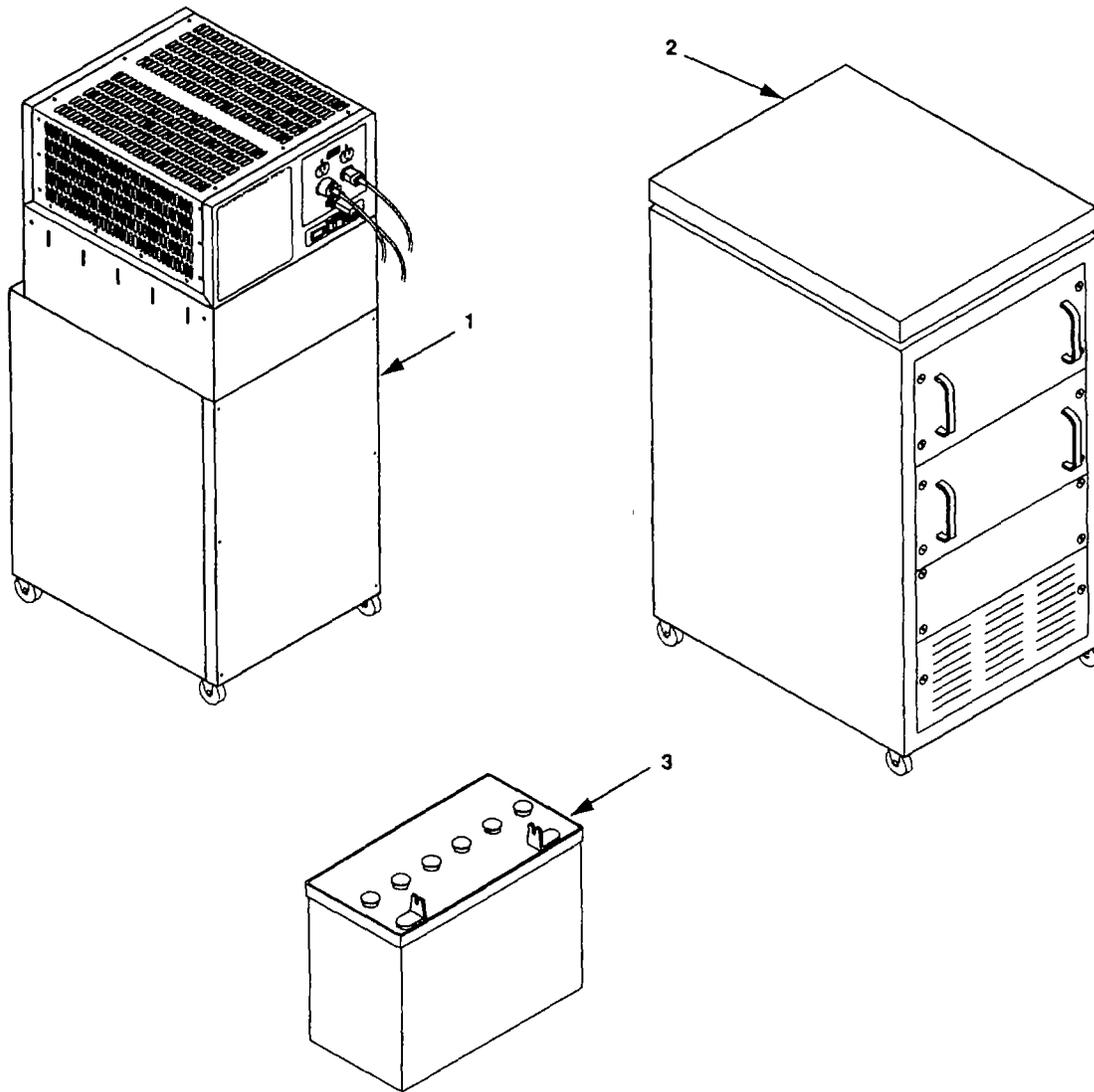
B-3.2 Column (2). The second column, National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

B-3.3 Column (3). The third column, Description and Usable On Code, identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the Commercial and Government Entity Code (CAGEC) (in parenthesis) and the part number. If the item you need is not the same for different models of the equipment, a Usable On Code will appear on the right side of the description column on the same line as the part number.

B-3.4 Column (4). The fourth column, U/I (unit of issue), indicates how the item is issued for the National Stock Number shown in column two.

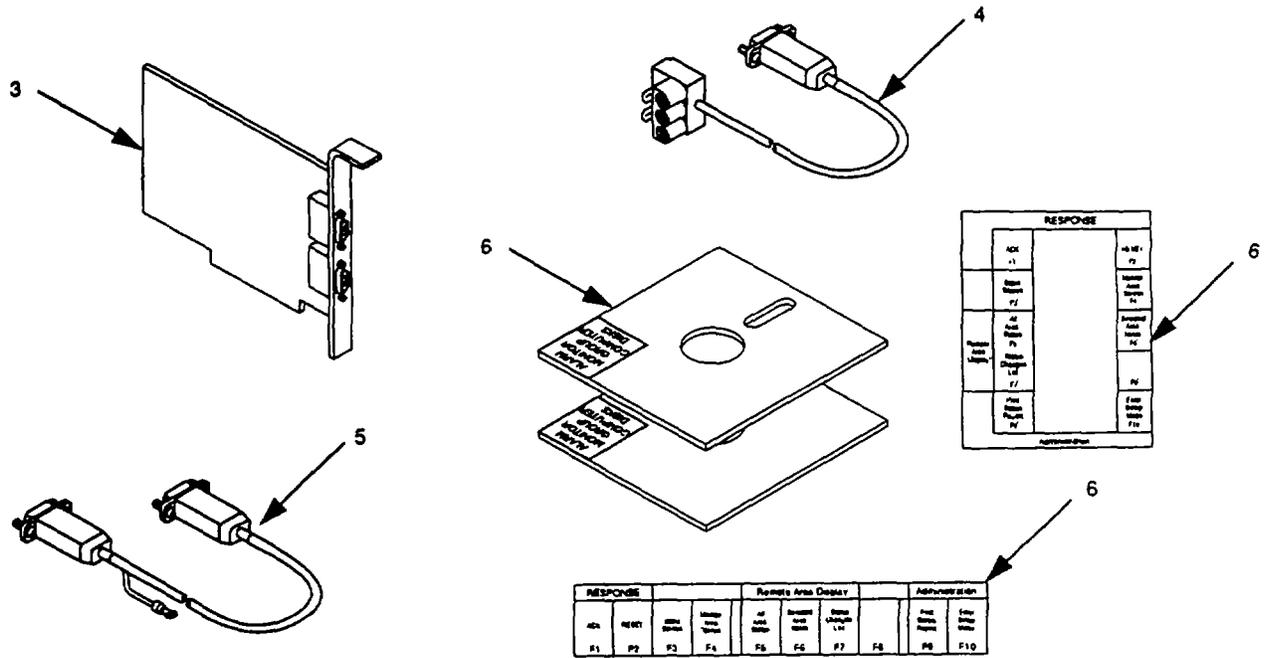
B-3.5 Column (5). The fifth column, Qty Rqd, indicates the quantity required.

SECTION II. COMPONENTED OF END ITEM



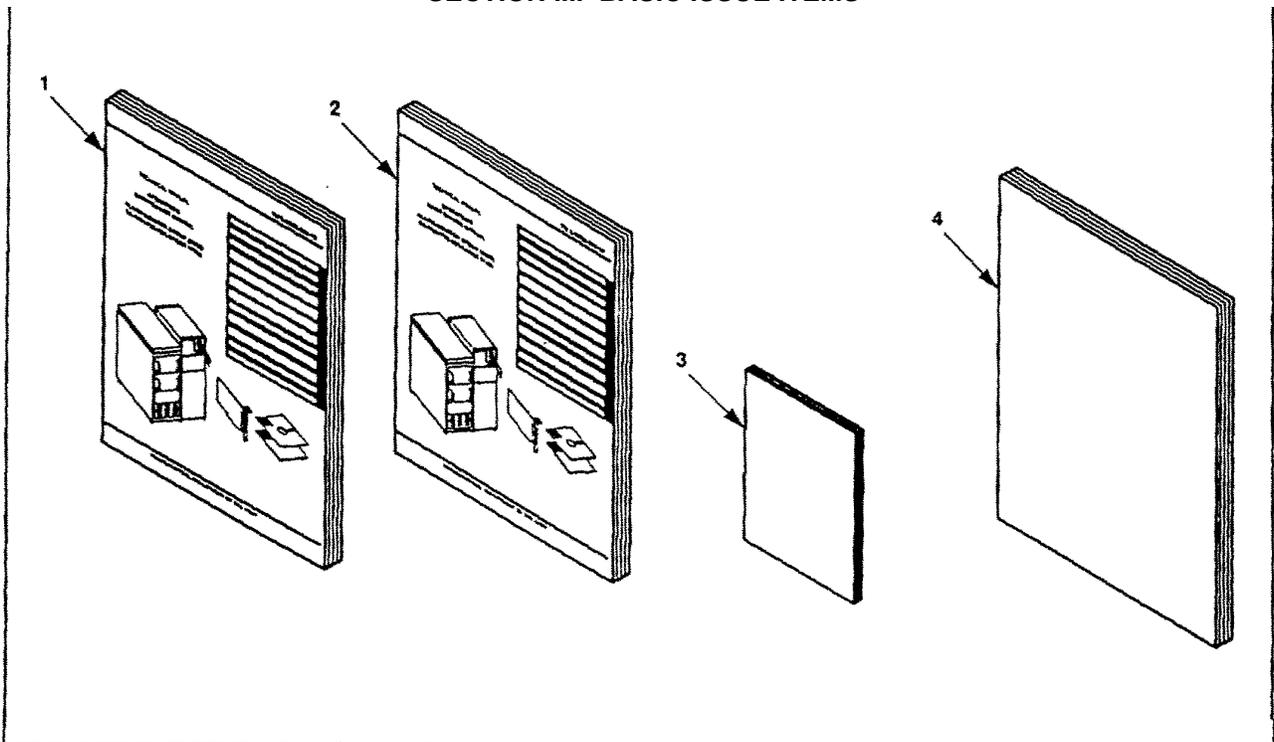
(1) Illus Number	(2) National Stock Number	(3) Description CAGEC and Part Number	Usable on Code	(4) U/I	(5) Qty Rqr
1		Power Supply, Uninterruptible, (97403) 13229E8340		EA	1
2		Converter Multiplexer Assembly, (97403) 13229E8140		EA	1
3		Battery, Lead Acid, Sealed, 12V (97403) 13229E8208		EA	6

SECTION II. COMPONENTS OF END ITEM



(1) Illus Number	(2) National Stock Number	(3) Description CAGEC and Part Number	(4) Usable on Code U/I	(5) Qty Rqr
3		Communications CCA, (97403) 13229E8149	EA	1
4		Cable, UPS Power Cable Assembly, (97403) 13229E8199	EA	1
5		Cable, RS-485 (97403) 13229E8188	EA	1
6		AMG PC Software, Diskette #1 and Diskette #2 (97403) 13229E8349	EA	1

SECTION III. BASIC ISSUE ITEMS



(1) Illus Number	(2) National Stock Number	(3) Description CAGEC and Part Number	Usable on Code U/I	(5) Qty Rqr
1		Technical Manual, TM 5-6350-280-23&P	EA	1
2		Technical Manual, TM 5-6350-280-10	EA	1
3		User's Manual for Communications CCA (97403) 13229E8140	EA	1
4		UPS Manual (97403) 13229E8340	EA	1

**APPENDIX C
ADDITIONAL AUTHORIZATION LIST
Section I. INTRODUCTION**

C-1 SCOPE

This appendix lists additional items you are authorized for the support of the Alarm-Monitor Group (AMG).

C-2 GENERAL

This list identifies items that do not have to accompany the equipment and that do not have to be turned in with it. These items are all authorized to you by the TDA.

C-3 EXPLANATION OF LISTING

National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. The items are listed in alphabetical sequence by item name. If the item you require differs between serial numbers of the same model, effective serial numbers are shown in the last line of the description .

SECTION II ADDITIONAL AUTHORIZATION LIST				
(2) National Stock Number	(3) Description CAGEC and Part Number	Usable on Code	(4) U/I	(5) Qty Auth
	<p>IBM-PC/AT compatible computer configured with the following minimum requirements:</p> <p>Industry Standard Architecture (ISA) Bus computer (8-bit bus) or compatible, 8 MHz processor, 20 MByte Hard Drive, 5 1/4 Inch double density (360K) or 5 1/4 Inch high density (1.2M) drive for Drive A, Parallel printer port Enhanced Graphics Adapter (EGA) video driver board Standard IBM-PC/AT Compatible Keyboard and 640 Kbyte RAM</p>		EA	1
	<p>Monitor</p> <p>EGA compatible color monitor with 13 inch screen</p>		EA	1
	<p>Optional Equipment:</p> <p>Computer equipment cart or table</p>		EA	1
	Floppy disk drive lock		EA	1
	Surge protection power strip		EA	1
	Virus checking software		EA	1
	<p>Printer,</p> <p>Dot Matrix, Parallel communications interface Error or fault output on pin 32 (paper out, offline, printer error) Tractor feed</p>		EA	1
	<p>Software, MS-DOS version 3.2</p>		EA	1

SECTION II ADDITIONAL AUTHORIZATION LIST-continued				
(2) National Stock Number	(3) Description CAGEC and Part Number	Usable on Code	(4) U/I	(5) Qty Auth
4920-01-154-1039	Strap, Wrist, Static (5K923) 5057-04-L		EA	1
4920-01-153-7615	Strap, Wrist, Static (20999) 2231		EA	1

*U.S. GOVERNMENT PRINTING OFFICE:1995-655-121/20230

Change 2 C-2

APPENDIX D

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

This Appendix is Not Applicable.

D-1/(D-2 blank)

GLOSSARY

SECTION I. ABBREVIATIONS

COMMON ABBREVIATIONS.

The common abbreviations used in this manual are in accordance with MIL-STD-12D and AR-310-25.

SPECIAL OR UNIQUE ABBREVIATIONS.

There are no special or unique abbreviations used in this manual.

SECTION II. DEFINITION OF UNUSUAL TERMS

UNUSUAL TERMS.

ACC.....	Access
AMG.....	Alarm-Monitor Group
ALM.....	Alarm
BAT.....	Battery
CCA.....	Circuit Card Assembly
CCCA.....	Communications Circuit Card Assembly
CMA.....	Converter Multiplexer Assembly
COM.....	Communications
COM-norm.....	Communications Normal
COM-FAIL.....	Communications Failure
CPU.....	Control Processing Unit
DOS.....	Disk Operating System
EGA.....	Enhanced Graphics Card
FSK.....	Frequency Shift Key
IBM.....	International Business Machine
IBM-PC/AT.....	International Business Machine-Personal Computer/Advanced Technology
INV.....	Inverter
I/O.....	Input/Output
ISA.....	Industrial Standard Architecture
J-SIIDS.....	Joint Service Interior Intrusion Detection System
MAINT.....	Maintenance
MOD.....	Module
MS-DOS.....	MicroSoft-Disk Operating System
page.....	Up to one computer screen of data
PNT.....	Printer
positive detent.....	The mechanism that holds a switch in place.
SEC.....	Secure
spoofing.....	Any attempt to circumvent either detection or access authorization procedures implemented by the system by any means.
TDA.....	Table of Distribution Allowances
typical.....	A representation of an item that is not exact
UPS.....	Uniterruptible Power Supply

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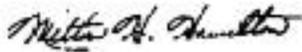
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By Order of the Secretary of the Army:

Official:



MILTON H. HAMILTON
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Secretary of the Army*

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Chief of Staff*

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter 10 Millimeters 0 01 Meters 0 3937 Inches
 1 Meter 100 Centimeters 1000 Millimeters 39 37 Inches
 1 Kilometer 1000 Meters 0 621 Miles

SQUARE MEASURE

1 Sq Centimeter 100 Sq Millimeters 0 155 Sq Inches
 1 Sq Meter 10 000 Sq Centimeters 10 76 Sq Feet
 1 Sq Kilometer 1 000 000 Sq Meters 0 386 Sq Miles

WEIGHTS

1 Gram 0 001 Kilograms 1000 Milligrams 0 035 Ounces
 1 Kilogram 1000 Grams 2 2 Lb
 1 Metric Ton 1000 Kilograms 1 Megagram 1 1 Short Tons

CUBIC MEASURE

1 Cu Centimeter 1000 Cu Millimeters 0 06 Cu Inches
 1 Cu Meter 1 000 000 Cu Centimeters 35 31 Cu Feet

LIQUID MEASURE

1 Milliliter 0 001 Liters 0 0338 Fluid Ounces
 1 Liter 1000 Milliliters 33 82 Fluid Ounces

TEMPERATURE

5/9 (F - 32) C
 212 Fahrenheit is equivalent to 100 Celsius
 90 Fahrenheit is equivalent to 32 2 Celsius
 32 Fahrenheit is equivalent to 0 Celsius
 9/5 C + 32 = F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2 540
Feet	Meters	0 305
Yards	Meters	0 914
Miles	Kilometers	1 609
Square Inches	Square Centimeters	6 451
Square Feet	Square Meters	0 093
Square Yards	Square Meters	0 836
Square Miles	Square Kilometers	2 590
Acres	Square Hectometers	0 405
Cubic Feet	Cubic Meters	0 028
Cubic Yards	Cubic Meters	0 765
Fluid Ounces	Milliliters	29 573
Pints	Liters	0 473
Quarts	Liters	0 946
Gallons	Liters	3 785
Ounces	Grams	28 349
Pounds	Kilograms	0 454
Short Tons	Metric Tons	0 907
Pound-Feet	Newton-Meters	1 356
Pounds per Square Inch	Kilopascals	6 895
Miles per Gallon	Kilometers per Liter	0 425
Miles per Hour	Kilometers per Hour	1 609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0 394
Meters	Feet	3 280
Meters	Yards	1 094
Kilometers	Miles	0 621
Square Centimeters	Square Inches	0 155
Square Meters	Square Feet	10 764
Square Meters	Square Yards	1 196
Square Kilometers	Square Miles	0 386
Square Hectometers	Acres	2 471
Cubic Meters	Cubit Feet	35 315
Cubic Meters	Cubic Yards	1 308
Milliliters	Fluid Ounces	0 034
Liters	Pints	2 113
Liters	Quarts	1 057
Liters	Gallons	0 264
Grams	Ounces	0 035
Kilograms	Pounds	2 205
Metric Tons	Short Tons	1 102
Newton-Meters	Pound-Feet	0 738
Kilopascals	Pounds per Square Inch	0 145
Kilometers per Liter	Miles per Gallon	2 354
Kilometers per Hour	Miles per Hour	0 621

