

# Miniplex IIIA

---

Computer Based Multiplex Security Alarm Reporting System

# Installation & Operation Manual

J3DA0102-001, Rev F

First edition

December 16, 2002

**Senstar**  **Stellar**

## **Senstar-Stellar locations**

### **Canada**

*Senstar-Stellar Corporation*  
119 John Cavanaugh Drive  
Carp, Ontario  
Canada K0A 1L0  
Telephone: +1 (613) 839-5572  
Fax: +1 (613) 839-5830

### **USA**

*Senstar-Stellar, Inc.*  
43184 Osgood Road  
Fremont, CA  
USA 94539  
Telephone: +1 (510) 440-1000  
1-800-676-3300  
Fax: +1 (510) 440-8686

### **UK**

*Senstar-Stellar Ltd.*  
Orchard House  
Evesham Road  
Broadway, Worcs.  
U.K. WR12 7HU  
Telephone: +44 (1386) 834433  
Fax: +44 (1386) 834477

Website: [www.senstarstellar.com](http://www.senstarstellar.com)  
email: [info@senstarstellar.com](mailto:info@senstarstellar.com)

J3DA0102, Rev F  
First edition  
December 16, 2002

### **Notice**

The information contained in this publication is proprietary and should not be copied or reproduced in whole or part without the written consent of Senstar-Stellar.

The information in this document is subject to change without notification. Additional pages may be inserted in future editions. The user is asked to excuse any omissions or errors in the present edition. No liability will be assumed by Senstar-Stellar for any changes, omissions, or errors in the manual or for any accidents that occur while the user is following instructions in it.

This installation and operation manual should be used as guideline information only. Specific design should be done for each individual site application.

Senstar-Stellar and the Senstar-Stellar logo are registered trademarks of Senstar-Stellar Corporation.  
Copyright © 2002, 2000 Senstar-Stellar Corporation.  
All rights reserved. Printed in Canada.

### **Europe**

*Senstar GmbH*  
Riedheimer Str. 8  
88677 Markdorf  
Germany  
Telephone: +49 (7544) 95910  
Fax: +49 (7544) 959129

### **Latin America**

*Senstar-Stellar Latin America*  
Pradera No. 214  
Col. Pradera  
Cuernavaca, Morelos  
62170, Mexico  
Telephone: +52 (777) 313-0288  
Fax: +52 (777) 317-0364

# Table of Contents

---

## ***Preface***

Audience .....	.xi
Accuracy .....	.xi
Conventions Used in this Manual .....	.xi
Customer Support .....	.xi
Radio and Television Interference .....	.xii
Cautions and Warnings .....	.xii

## ***1 Introduction***

1.1 Overview .....	1-1
1.1.1 Document Organization .....	1-3
1.1.2 Related Publications .....	1-3
1.1.3 Features .....	1-4
1.1.4 Specifications .....	1-4
1.1.5 Options .....	1-5
1.2 Functional Description .....	1-6
1.2.1 Polling Transponders .....	1-6
1.2.2 Transponder Communication Errors .....	1-6
1.3 Hardware Description .....	1-7
1.3.1 Miniplex MA Computer .....	1-7
1.3.2 Cards Installed in the Computer .....	1-7
1.3.2.1 The Trunk Card .....	1-7
1.3.2.2 Map/Relay Interface Card .....	1-8
1.3.3 Keypad .....	1-9
1.3.4 Speaker Module .....	1-10
1.3.5 Printer .....	1-11
1.3.6 Trunk Cable .....	1-12
1.3.7 Transient Protection Module .....	1-12
1.3.8 Local Maps .....	1-13
1.3.8.1 Local Map LEDs .....	1-14
1.3.8.2 Local Map Communications .....	1-14
1.3.9 Mobile Maps .....	1-15
1.3.10 Relay Interface .....	1-16
1.4 Transponders .....	1-18
1.4.0.1 Control Transponder .....	1-19
1.4.0.2 Audio/Control Transponder .....	1-19

---

## **2 Installation Planning**

2.1 General .....	2-1
2.1.1 Environmental Specifications .....	2-2
2.1.2 Trunk Cable Requirements .....	2-3
2.2 Installation Plan .....	2-4
2.2.1 Hardware Location .....	2-4
2.2.2 Transient Protection .....	2-4
2.2.3 Transponder Locations .....	2-4
2.2.4 Transponders Standby Power .....	2-5
2.2.5 Audio Bandwidth .....	2-5
2.2.6 Local Map Interface .....	2-6
2.2.7 Relay Interface .....	2-6
2.2.8 Mobile Map Interface .....	2-6

## **3 Installation**

3.1 Section Contents .....	3-1
3.2 Unpacking the Equipment .....	3-2
3.2.1 Verifying Shipment Contents .....	3-3
3.3 Installation Overview .....	3-4
3.3.1 Tools Required .....	3-4
3.3.2 General .....	3-4
3.4 Trunk Card Installation .....	3-6
3.4.1 Setting the Site Password .....	3-6
3.4.2 Installing the Card .....	3-7
3.5 Map/Relay Interface Card Installation .....	3-8
3.5.1 Setting the DIP Switches .....	3-8
3.5.2 Installing the Card .....	3-9
3.6 Speaker Module Installation .....	3-10
3.7 Printer Installation .....	3-11
3.8 High-Voltage Transient Protector Installation .....	3-12
3.9 Trunk Cable Installation .....	3-14
3.10 Transponder Installation .....	3-15
3.11 Setting Transponder Addresses .....	3-16
3.12 Sensors Installation .....	3-17
3.13 Local Map Installation .....	3-17
3.14 Mobile Map Installation .....	3-18
3.15 Relay Interface Installation .....	3-20
3.16 Verifying the Installation .....	3-21

## **4 Site Configuration**

4.1 Section Contents .....	4-1
4.2 Security Manager Procedures .....	4-2
4.3 Configuring the System .....	4-3
4.3.1 Operator's Screen .....	4-3
4.3.2 Entering the Site Password .....	4-5
4.3.4 Configuring Alarm Zones .....	4-4
4.3.3 Miniplex MA Configuration Menu .....	4-6
4.3.5 Site Overview .....	4-7
4.3.6 Configuring Maps .....	4-9
4.3.7 Configuring Relay Outputs .....	4-10
4.3.8 Set Password for Changing Secure to Access .....	4-13
4.3.9 Setting the Clock/Calendar .....	4-14
4.3.10 Printer On/Off Status .....	4-16
4.3.11 Hourly Printout Status .....	4-17
4.3.12 Non-configurable Numbers .....	4-18
4.3.12.1 Power Up Number .....	4-18
4.3.12.2 Revision Number .....	4-19
4.3.12.3 Event Number .....	4-19

## **5 Operation**

5.1 Section Contents .....	5-1
5.2 Operator's Screen .....	5-2
5.2.1 Screen Symbols .....	5-3
5.2.2 Screen Fields .....	5-4
5.2.3 Operator Prompts .....	5-5
5.2.4 Failure Messages .....	5-6
5.3 Keypad Functions .....	5-7
5.4 System Monitoring .....	5-8
5.4.1 Acknowledging a Security or Supervisor Alarm .....	5-8
5.4.2 Securing a Zone from Alarm .....	5-8
5.4.3 Placing a Zone in Access .....	5-8
5.4.4 Securing a Zone from Access .....	5-9
5.4.5 Acknowledging a System Fault (Communications Line or Audio Line Failure).....	5-9
5.4.6 Securing from Communications or Audio Line Failure .....	5-9
5.4.7 Acknowledging a Map or Printer Failure .....	5-10
5.4.8 Clearing System Fault Prompts .....	5-10
5.4.9 Selecting an Audio Zone for Monitoring .....	5-11
5.4.10 Selecting a Control Zone to Activate or Deactivate .....	5-11

---

## **6 Maintenance -**

6.1 Miniplex IIIA System Maintenance .....	6-1
6.2 Computer Maintenance .....	6-2
6.3 Keypad Maintenance .....	6-3
6.4 Printer Maintenance .....	6-4
6.5 Power Supply Maintenance .....	6-5

## **A Command Summary**

A.1 RS-232 Serial Port .....	A-1
A.2 Parallel (Printer) Port .....	A-2
A.3 RS-422 Port .....	A-3
A.4 Trunk Cable Ports .....	A-3
A.5 Phono Jack .....	A-4

## **B Operator's Guide**

B. 1 General .....	B-1
B.2 Opening and Closing the Computer .....	B-3
B.2.1 Opening the Computer .....	B-3
B.2.2 Closing the Computer .....	B-4
B.3 Installing the Trunk Card .....	B-5
B.4 Installing the Map/Relay Interface Card .....	B-6
B.5 Computer Power Installation .....	B-7
B.6 Connecting the Keypad .....	B-8
B.7 Printer Installation .....	B-9

## **Index**

## ***Figures***

Figure 1 -1 Miniplex IIIA Alarm Reporting System .....	1-2
Figure 1-2 Trunk Card .....	1-7
Figure 1-3 Map/Relay Interface Card .....	1-8
Figure 1-4 Keypad .....	1-9
Figure 1-5 Optional Speaker Module .....	1-10
Figure 1-6 Printer (model PR-105) .....	1-11
Figure 1-7 Transient Protector Module (Model 6263) .....	1-12
Figure 1-8 Example of a Custom-designed Local Map .....	1-13
Figure 1-9 Relay Interface Diagram .....	1-16
Figure 1-10 Transponder Card .....	1-18
Figure 2-1 Audio Bandwidth .....	2-5
Figure 3-1 Trunk Card Showing the Password DIP Switches .....	3-6
Figure 3-2 Map/Relay Interface Card .....	3-8
Figure 3-3 Speaker Module Installation .....	3-10
Figure 3-4 HV Transient Protector Installation: Dual Trunk with Audio .....	3-12
Figure 3-5 HV Transient Protector Controller: Two Trunks without Audio .....	3-13
Figure 3-6 Trunk Cable Connection to Computer .....	3-14
Figure 3-7 Trunk Cable Pinouts .....	3-14
Figure 3-8 Transponder Installation Wiring Diagram .....	3-15
Figure 3-9 Setting Transponder Addresses .....	3-16
Figure 3-10 Local Map Interface Diagram .....	3-17
Figure 3-11 Mobile Map Interface Diagram .....	3-18
Figure 3-12 Power Up Operator's Screen .....	3-21
Figure 4-1 Security Manager Screens .....	4-2
Figure 4-2 Operator's Screen .....	4-3
Figure 4-3 Operator's Screen with Password Prompt .....	4-4
Figure 4-4 Miniplex IIIA Configuration Menu .....	4-5
Figure 4-5 Site Configuration Screen .....	4-6
Figure 4-6 Site Overview Screen .....	4-8
Figure 4-7 Map Configuration Screen .....	4-9
Figure 4-8 Configuring Relay Outputs .....	4-10
Figure 4-9 Set Password for Changing Secure to Access Menu Selection .....	4-13
Figure 4-10 Setting the Clock/Calendar Menu Selection .....	4-14
Figure 4-11 Printer On/Off Status Menu Selection .....	4-16
Figure 4-12 Set Hourly Printout Status Menu Selection .....	4-17
Figure 4-13 Power Up Screen .....	4-18
Figure 4-14 Printer Output of Events .....	4-19
Figure 5-1 Operator Screen with Site Configured .....	5-2
Figure A-1 RS-232 Serial Port Pinouts .....	A-1
Figure A-2 Parallel Port Pinouts .....	A-2
Figure A-3 RS-422 Port Pinouts .....	A-3
Figure A-4 RS-422 Port Pinouts .....	A-3

Figure A-5 Phono-Jack ..... A-4  
 Figure B-1 IBM PS/2 Model 25 Computer, Front View ..... B-1  
 Figure B-2 IBM PS/2, Model 25 Desktop Computer, Rear View ..... B-2  
 Figure B-3 Cover Mounting Screws of the PS/2 Model 2.15 ..... B-3  
 Figure B-4 Side View of Card Slots in the PS/2 Computer ..... B-4  
 Figure B-5 Computer Power Installation ..... B-7  
 Figure B-6 Connecting the Keypad ..... B-8  
 Figure B-7 Printer Installation ..... B-9  
 Figure B-8

***Tables***

Table 1-1 LED Status ..... 1-14



## LIMITED HARDWARE WARRANTY

Stellar Security Products, Inc. warrants each of its MINIPLEX IIIA™, Multiplex Alarm Monitoring and Control Systems to be free from defects in materials and workmanship for a period of **twelve (12) months** from the date of shipment.

The limit of liability under this Warranty is to repair or replace, **whichever of these alternatives Stellar Security Products, Inc. deems appropriate**, any MINIPLEX IIIA unit or part thereof within **twelve (12) months after shipment** to the original purchaser.

Conditions of this Warranty require that the unit is **returned, insured and with shipping costs prepaid**, to Stellar Security Products, Inc. at its plant in Santa Clara, California. A further condition is that the unit is not found by Stellar Security Products, Inc. to have become defective from **misuse or abnormal conditions of operation**.

Misuse will render this Warranty null and void. Misuse includes, but is not limited to, any attempts to repair or modify any MINIPLEX IIIA unit or component thereof by anyone other than Stellar Security Products, Inc. personnel or a Stellar Security Products, Inc. authorized repair facility.

Abnormal conditions of operation include, but are not limited to, damage by earthquake, fire, lightning, or other force majeure.

This Warranty shall be limited to the repair or replacement of MINIPLEX IIIA units and shall not extend to any incidental or consequential damages resulting from a malfunctioning unit.

Excluded from this Warranty are normally expendable items such as fuses and batteries, except to the extent that such parts are warranted by the original manufacturer and such warranty is marked on the product. Claim under such warranty should be made by the purchaser directly to the manufacturer.

Stellar Security Products, Inc. reserves the right to make changes in design on any of its products without incurring any obligation to make the same changes on units previously purchased.

The Warranty described above shall be in lieu of any other warranty, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for any particular purpose. Stellar Security Products, Inc. shall not be liable for consequential damages and its liability is expressly limited to the obligations expressed herein. Stellar Security Products, Inc. neither assumes nor authorizes any other person to assume for it any other warranty concerning its products.

Units returned to Stellar System for inspection and repair or replacement must be sent **insured, and with freight prepaid**. to:

**Stellar Security Products, Inc.**  
**3511 Leonard Court**  
**Santa Clara CA, 95054 USA**  
**ATTN: Repair Department**

A copy of the return papers **must be included** inside the container or unit, as well as the **Return Authorization Number** and a **clear statement of malfunction**. Please contact Stellar Security Products' Customer Service Department for the issuance of a Return Authorization Number prior to shipment.

Stellar Security Products cannot accept responsibility for products returned without proper shipping/order documents and information describing the nature of the malfunction and reason for return.

Stellar Security Products can be reached directly for any questions by calling:

**Field Service Engineering**  
**Telephone: 408-496-6690**  
**Fax No: 408-727-8284**

## SOFTWARE/FIRMWARE LICENSE

If software/firmware is provided as part of the Equipment, such software/firmware is furnished to the Purchaser under a non-exclusive, non-transferable license. Use of the software/firmware by the Purchaser is solely in conjunction with the specified Equipment being purchased. Purchaser shall not provide or otherwise make available software/firmware, either in whole or in part, or copies thereof in any form to any third party. Except as otherwise specifically provided for in this Warranty, no license or other right of any nature whatsoever in or to the software/firmware is transferred to the Purchaser, including any license by implication, estoppel or otherwise and no title to, or ownership of the software/firmware, either in whole or in part, is transferred to or shall vest in the Purchaser. Stellar shall have the right to terminate Purchaser's license if Purchaser fails to comply with the terms of the license granted hereby and Purchaser agrees, upon notice of such termination, to immediately return the software/firmware and all portions or copies thereof, if any.

If the Purchaser is in breach of the terms of this license, Stellar, in addition to the remedy set forth in the above paragraph, may enforce against Purchaser any and all remedies available to Stellar, both at law and in equity. Purchaser hereby acknowledges that Purchaser's agreement to comply with the terms of the license is a material consideration for Stellar selling the Equipment and related software/firmware to Purchaser.

In the event Purchaser resells or otherwise transfers Equipment purchased which is subject to the provisions of this Warranty, then Stellar will grant Purchaser's transferee the license to use the applicable software/firmware solely in the manner described above, provided that the transferee agrees in writing with Stellar prior to any such transfer being made to be bound by such license terms. Any attempted transfer of the Equipment without compliance with the software/firmware transfer provisions hereof shall constitute a breach of the Warranty for which Stellar may enforce any and all of its rights as set forth hereof. It being further provided that in the event the Purchaser transfers the Equipment without the software/firmware, then in any such event, Purchaser shall immediately upon such transfer of the Equipment return the software/firmware, and all portions or copies thereof, if any, to Stellar.

The software/firmware furnished is warranted to operate the Equipment so as to perform certain specified functions in accordance with Stellar's written descriptions thereof. Stellar's sole obligation pursuant to the software/firmware warranty shall be to remedy any non-conformance of the software/firmware to such written descriptions within a period of twelve (12) months from the date of shipment to the Purchaser. The aforesaid warranty shall be void in the event Purchaser, without the prior written consent of Stellar makes, or attempts to make, any modifications in or to the software/firmware. THE AFORESAID WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, IT BEING UNDERSTOOD THAT ALL SUCH OTHER WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE HEREBY EXPRESSLY EXCLUDED. IN NO EVENT SHALL STELLAR BE LIABLE TO PURCHASER FOR ANY DIRECT COLLATERAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH PURCHASER'S USE OF THE SOFTWARE/FIRMWARE, OR FOR ANY OTHER CAUSE WHATSOEVER RELATING TO THE SOFTWARE/FIRMWARE.

## **Audience**

This manual explains how to install and use the Miniplex™ IIIA Security Alarm Reporting System. It steps you through the planning, installation, and operation of the system. All information required by the site manager and the operator is described in detail.

## **Accuracy**

This manual is based on the latest product information available at the time of printing. Stellar Systems has reviewed it for accuracy, but can not be held responsible for any omissions or errors. Stellar Systems reserves the right to revise this publication and to make changes without obligation to notify anyone of such changes.

## **Conventions Used in this Manual**

Different fonts are used in this manual to indicate different types of information:

- New Century Schoolbook is used for text
- *Italics* is used for emphasis, notes, and title of a book or section
- Helvetica is use for text displays
- **Helvetica bold** is used for user input

## **Customer Support**

If you have any comments or questions regarding the operation of any of Stellar Systems products, please contact us directly at:

Phone: (408) 496-6690  
Fax: (408) 727-8284  
Telex: ITT 470-702

## Radio and Television Interference

**Warning!** The computer used in the Miniplex™ IIIA System generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, you are encouraged to try to correct the interference by one or more of the following measures:

1. Reorient the receiver antenna.
2. Relocate the computer with respect to the receiver.
3. Move the computer away from the receiver.
4. Plug the computer into a different outlet so the computer and receiver are on different branch circuits.

If necessary, you should consult the dealer for additional suggestions. The following booklet, prepared by the Federal Communications Commission, can be helpful:

*How to Identify and Resolve Radio - TV Interference Problems*

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock number is 004-000-00345-4.

## Cautions and Warnings

The following international symbols appear in this manual when you must perform procedures that require close proximity to electrical current:



**Caution:** If the instructions are not followed exactly, the equipment may be damaged.

---



**Warning:** Hazardous voltages are present. If the instructions are not followed exactly, there is a risk of electrical shock.

---

# *Section 1*

## *Introduction*

---

### **1.1 Overview**

The Miniplex IIIA™, shown in Figure 1-1, is a time-division, multiplex alarm reporting system for both indoor and outdoor security installations. The system is economical, simple to operate, and can monitor up to 32 two-zone Control transponders or Audio/Control transponders, providing a total of 64 alarm zones and 64 supervisory zones.

The transponders can be up to 4000 feet apart, providing a maximum operating distance from the computer to the furthest transponder of more than 18 miles. The Control transponders include two relays that allow the operator to manually activate remotely located electrical devices. The Audio/Control transponders permit the operator to assess alarms generated by Stellar's E-Flex™ cable sensor and other compatible sensors with audio capability.

The status of each zone is displayed on a monitor. Alarm activity is audibly annunciated and can be recorded on an optional local printer. A simple keypad controls the system's operation. The labelled function keys simplify system operation and speed the operator's response during an emergency. The same keypad is used for site configuration and system programming.

Optional wall-mounted and mobile maps are available to identify the location of the alarm. An optional relay interface can activate a video switcher in the event of an alarm.

The software that operates the system is stored in nonvolatile memory so that floppy disks are not required. For extra security, a customer-selected password restricts access to the system programming mode so that operators cannot make changes to the site configuration information.

An optional Uninterruptible Power Supply (UPS) allows the Miniplex IIIA to continue operating for up to 30 minutes during a power failure.

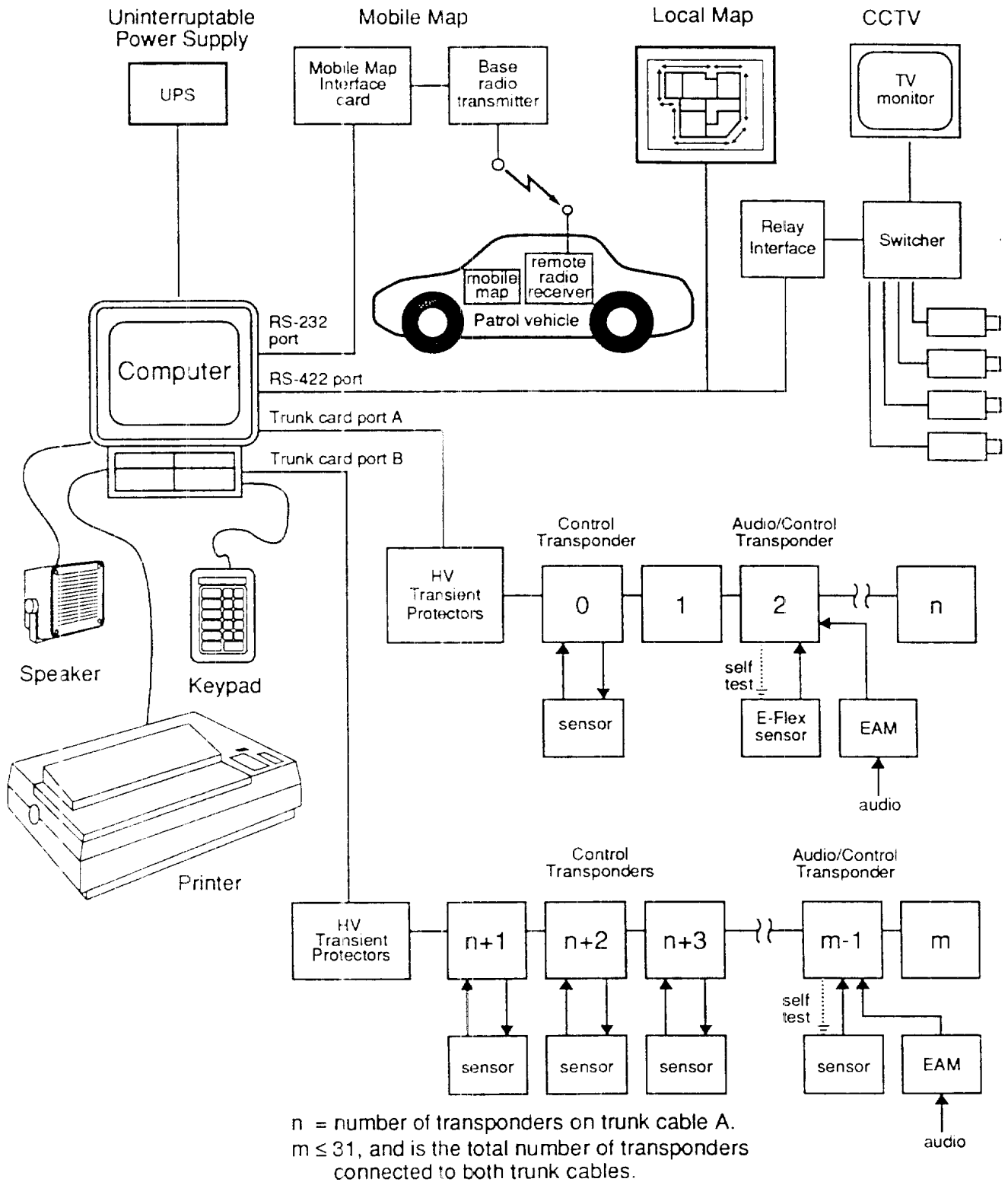


Figure 1-1. Miniplex IIIA Alarm Reporting System

### 1.1.1 Document Organization

The contents of this manual are described below:

- Chapter 1, *Introduction*, explains the Miniplex IIIA System and how it is used, gives a functional description of its operation, and describes the major components of the hardware.
- Chapter 2, *Installation Planning*, discusses the steps you should take before installing your Miniplex IIIA System.
- Chapter 3, *Installation*, explains how to install all of the components of the Miniplex IIIA System, including transponders and sensors.
- Chapter 4, *System Configuration*, explains how to configure the Miniplex IIIA System with the site information necessary to customize the system to your installation.
- Chapter 5, *Operation*, explains how to operate the Miniplex IIIA System. There is a section describing some typical situations that an operator might encounter and how he/she should respond to them.
- Chapter 6, *Maintenance*, gives general guidelines for maintaining your Miniplex IIIA System.
- Appendix A, *Connector Pinouts*, lists and describes the function of each pin of the connector used in the Miniplex IIIA system. The following connector types are described:
  - 25-pin RS-232 serial connector used for the mobile maps
  - 25-pin parallel connector used for the printer
  - 9-pin RS-422 connectors used for the relay interface
  - 9-pin connectors on the Trunk card that are used to connect the trunk cable to the computer

### 1.1.2 Related Publications

- Computer documentation set
- Printer documentation set
- UPS-III Power Supply Manual
- H-Field Buried Line Field Disturbance Sensor Installation Manual
- E-Flex Perimeter Sensor Installation Planning Guide

### 1.1.3 Features

- Low-cost, computer-based, proprietary monitoring system
- Simple keypad operation
- Two-wire multiplex wiring (four-wire multiplex wiring for audio)
- Monitors 64 alarm and supervisory zones
- Provides 64 zones of audio assessment and 64 zones of relay control
- Transponders can be up to 4000 feet apart (18 miles total capability)
- Customer- selected security password
- Optional activity logging printer
- Optional relay interface

### 1.1.4 Specifications

- **CP-111A Computer with Trunk Card**
  - Color monitor
  - System software stored in EPROM
  - Site configuration information stored in non-volatile memory
  - Selectable voltage, 115VAC or 230VAC
  - Power cord and cables as required
- **6017A Keypad**
  - 7 function keys
  - 10 numeric keys
- **6060 Control Transponder**
  - Operating temperature -20° F to +158° F (-30° C to +70° C)
  - Relative humidity to 95%, non-condensing
  - Monitors 2 zones, 3 end-of-line resistor supervised inputs per zone
  - Controls 2 relay outputs
  - Relay contacts selectable NO/NC, 1 Amp at 30VDC maximum non-inductive load
- **6064 Audio/Control Transponder**
  - Operating temperature -20° F to +158 F° (-30° C to +70° C)
  - Relative humidity to 95%, non-condensing
  - Monitors 2 zones, 3 end-of-line resistor supervised inputs per zone
  - Monitors 2 audio channels
  - Controls 2 relay outputs
  - Relay contacts selectable NO/NC, 1 Amp at. 30VDC maximum non-inductive load



### 1.1.5 Options

- **MD-104 Wall-mounted Map Display**
  - 64 Zones
  - Wall or rack mounted
  - 12VDC operation
  - Displays alarm and supervision/tamper status
  
- **MD-32 Mobile Map Display**
  - 32 Zones nominal
  - Vehicle mounted, adjustable viewing angle
  - 12VDC operation
  - Illuminated front panel
  - Audible alert with silence switch
  - Lamp test switch
  
- **Model MIII-R Relay Interface Controller**
  
- **UPS-III A Uninterruptible Power Supply**
  - 10 minute standby power, computer/monitor only
  - battery pack expansion, includes 4 batteries for 20 minutes additional standby power
  
- **6010 Speaker Module**
  
- **PR-105 Parallel Printer**
  - 115 or 230V AC operation
  - Cables as required
  
- **6263 Transient Protector Kit**
  
- **6000 Audio Level Tone Generator**

For the following please contact Stellar Systems:

- **Rack-mounted CPU**

## 1.2 Functional Description

Control transponders monitor alarms and allow the operator to activate remotely-located electrical devices such as locks and lighting switches. Control transponders are connected in series on a two-wire cable.

Audio/Control transponders monitor alarms and allow the operator to audibly assess an intrusion, escape, or hold-up in progress. Audio/Control transponders are connected in series on a four-wire cable and incorporate a unity gain amplifier to regenerate the audio signal. This insures that the operator receives clear, crisp audio over long distances.

### 1.2.1 Polling Transponders

A Trunk card, mounted in the computer, sequentially polls the addresses of all enabled transponders. At each polling, the computer sends the transponder an address byte and a command byte. The address byte identifies the transponder being polled, and the command byte gives the transponder relay on/off commands.

When a transponder receives an address byte that matches the address set on its DIP switches, the transponder echoes the address and then sends an on/off status byte that indicates the status of contact points 1 through 6. The computer compares the current status byte from the transponder to the status byte previously received from the transponder. If they do not match, the status byte is examined to determine which bits have changed. Any contact-point change will update the alarm/restore state of that point. The next time the computer polls in the normal sequence, the returned status byte of the transponder in question is reexamined.

In a fully configured system, the transponders are polled about once every second. If the trunk cable is installed incorrectly, or has been damaged or is severed, the transponders beyond the point of damage will not be polled. Any missing responses are annunciated as communication failures.

### 1.2.2 Transponder Communication Errors

A transponder communication error is generated if a transponder does not communicate in response to a poll, or there is a parity error in either the address or the status byte. If a second transponder communication error occurs during the next polling sequence, a communication failure alarm will be generated. When two sequential polls are received correctly, the operator will be able to clear the communication failure alarm.

## 1.3 Hardware Description

### 1.3.1 Miniplex IIIA Computer

See Appendix B for information on the specific computer system ordered.

### 1.3.2 Cards Installed in the Computer

#### 1.3.2.1 The Trunk Card

The Trunk card, shown in Figure 1-2, interfaces the computer with the transponders. The card contains firmware in EPROM (Electrically Programmable Read-only Memory) that runs the computer. Site configuration programming is stored in non-volatile RAM on the card. There is also a clock/calendar with battery, transponder communication circuitry, A/D converter for trunk cable diagnostics, an audio amplifier, and two (2) DIP switches. The trunk card is normally installed in the computer before it is shipped to a customer.

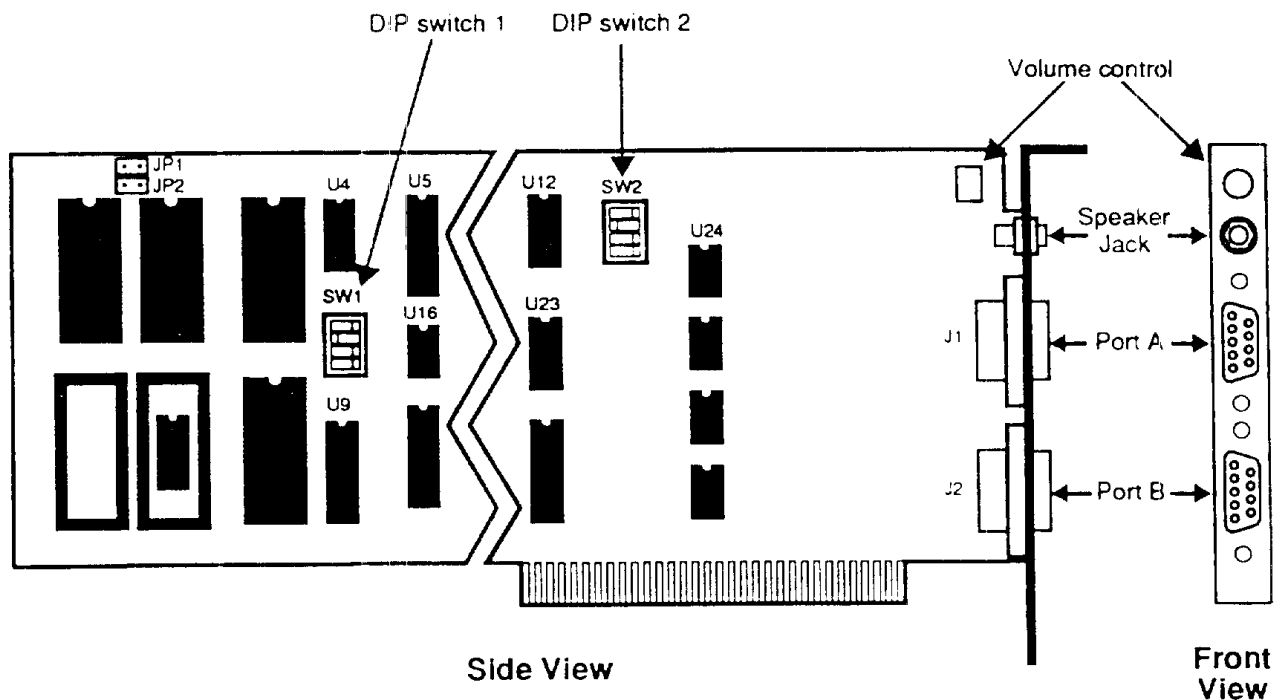


Figure 1-2. Trunk Card

DIP switch 1 is used to set the site password. The default password set at the factory is 4300. To set a new password, follow the instructions given in Section 3.5.1, *Setting the Site Password*.

DIP switch 2 is used to set the hardware configuration of the Miniplex IIIA System.

### 1.3.2.2 Map/Relay Interface Card

The Map/Relay Interface card is used to control the operation of local maps and the relay interface, which can be used to control closed circuit television (CCTV). (See Section 1.3.8, *Local Maps*.) When an optional, custom-designed local map is ordered, the Map/Relay Interface card is installed in the computer before it is shipped. See Figure 1-3.

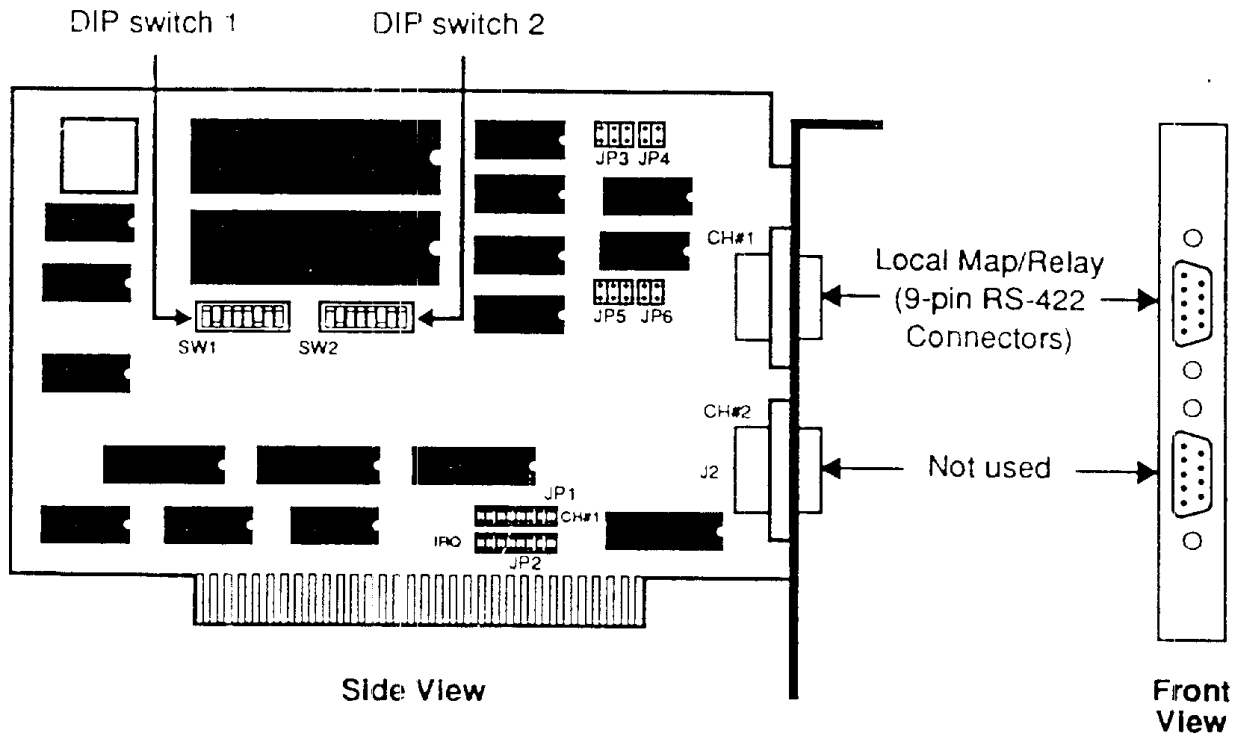


Figure 1-3. Map/Relay Interface Card

The DIP switches on the card are set at the factory to indicate the number of maps configured in the installation.

### 1.3.3 Keypad

A simple keypad with seven function keys and ten numeric keys is used to configure and operate the system. Each key is labelled by function (Figure 1-4). A brief description of the function of each key is given below. See Section 4 for a more detailed description of the keypad functions.

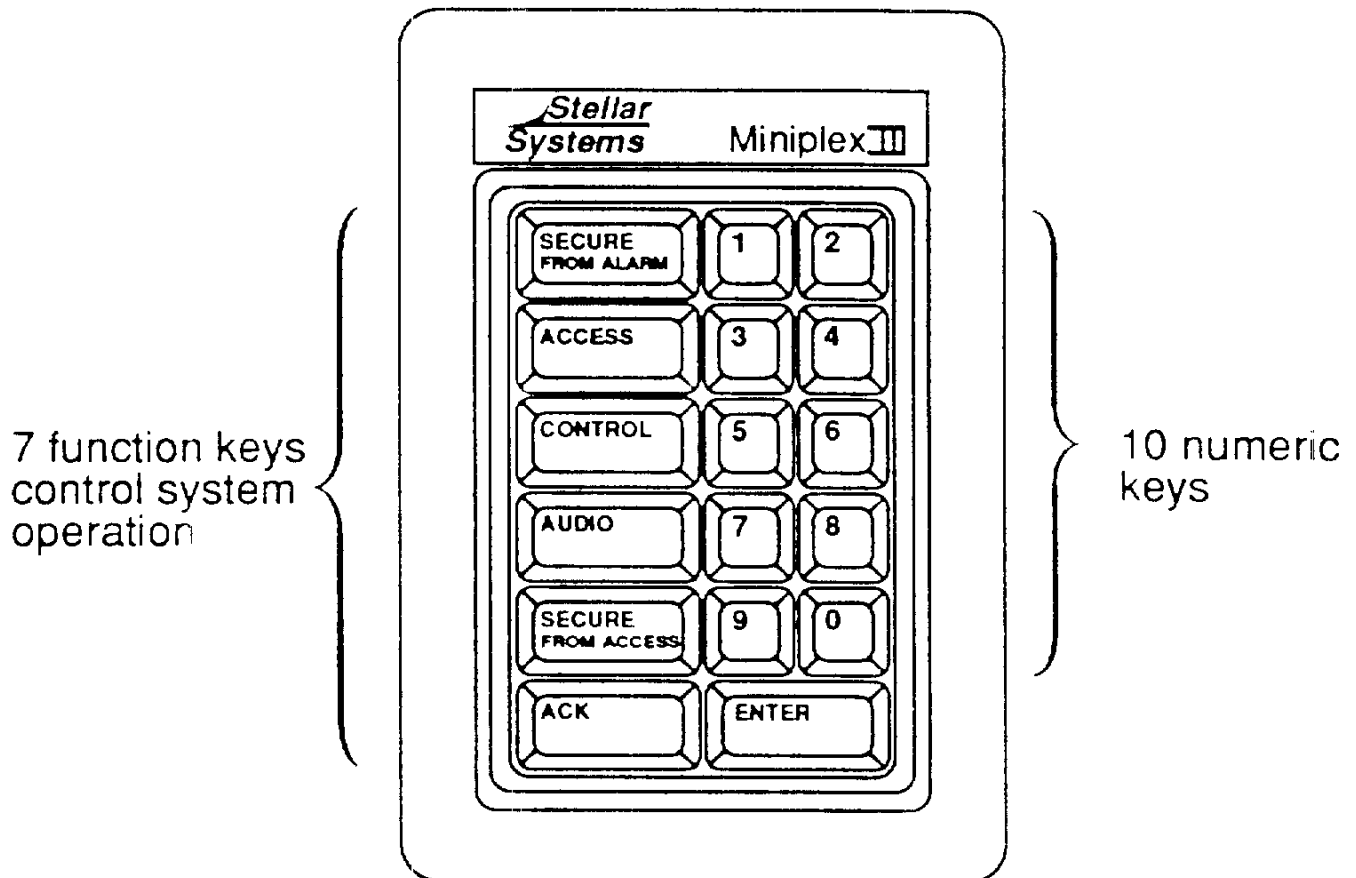


Figure 1-4. Keypad

- SECURE FROM ALARM is used to clear an alarm after the sensor has been returned to normal.
- ACCESS prevents sensor activity from being annunciated as an alarm by the computer. The supervision portion of the zone remains active.
- CONTROL allows the operator to turn on remote relays at the transponders.
- AUDIO is used to toggle audio on or off for a zone with audio capability.
- SECURE FROM ACCESS secures a zone from access.
- ACK (acknowledge) is used to respond to an alarm and silence the audible alert.
- ENTER enters and stores selected data in the computer.

The numeric keys are used to make selections in response to prompts and to enter numeric information in the fields indicated on the screen.

### 1.3.4 Speaker Module

The Miniplex IIIA Trunk card has a rear panel jack for an optional audio speaker. When a system is configured to include audio assessment, an optional Speaker Module (Model 6010) can be installed within hearing distance of the operating personnel. Refer to Figure 1-5.

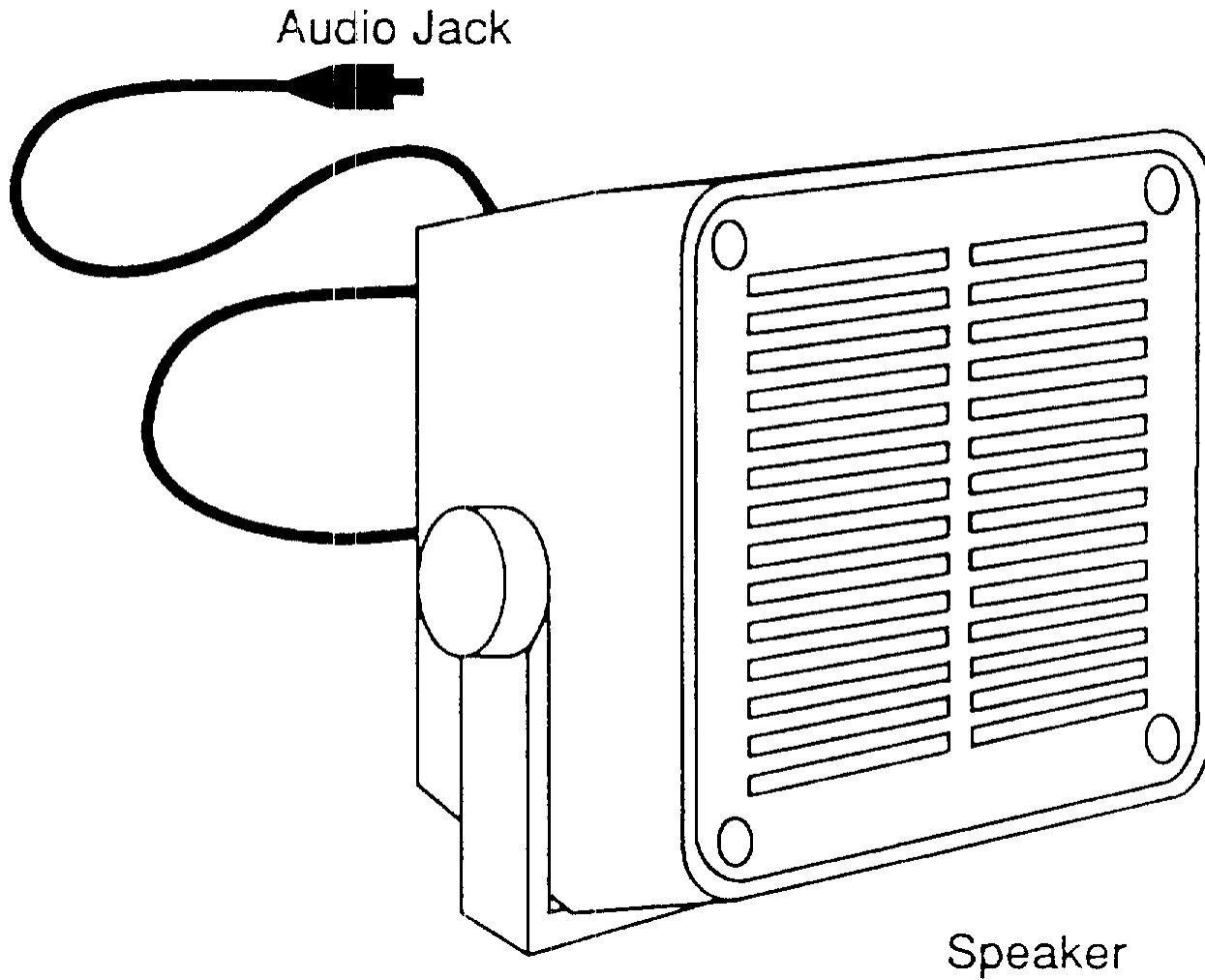
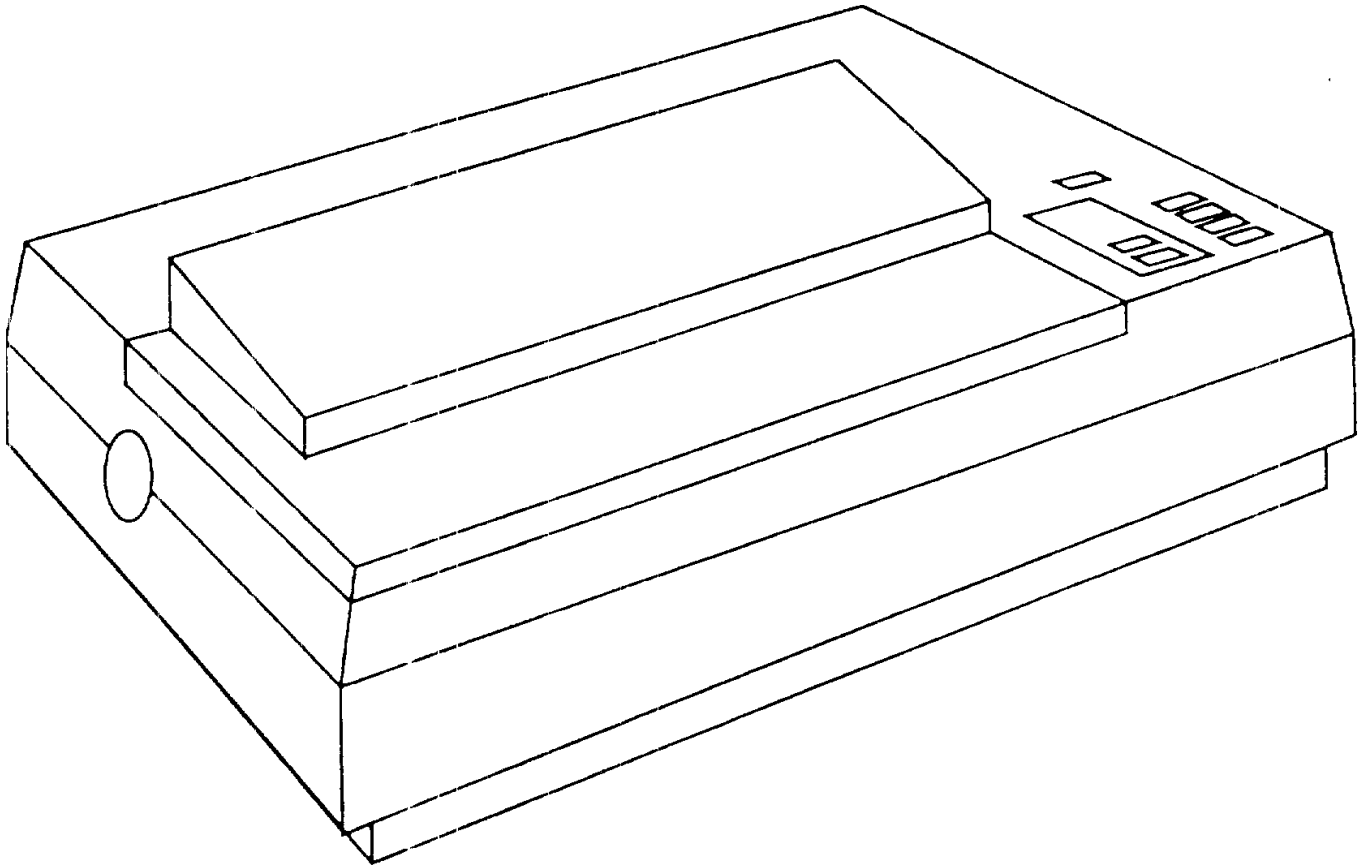


Figure 1-5. Optional Speaker Module

### 1.3.5 Printer

An optional printer (Model PR-105) is recommended for use with the Miniplex IIIA system (Figure 1-6). When a system includes a printer, you can print a hard-copy record of site activity for later reference. The printer must sit close enough to the computer so that it can be directly connected.



**Figure 1-6. Printer (model PR-105)**

The printer ON/OFF status can be configured from the keypad. When ON status is selected, site activity will be logged.

---

**Note:** Detailed information about the printer can be found in the manual supplied by the printer manufacturer and shipped with the product.  
Please read the manual.

---

### 1.3.6 Trunk Cable

The trunk cable is used for system communications. The cable may already be installed at a customer site when the Miniplex IIIA is purchased. Any existing communication cable should be diagrammed with care so that the information can be configured in the computer. The existing cable is connected to the computer in the same manner as a new trunk cable installation. Refer to Section 2 for installation planning, and Section 3 for installation instructions.

### 1.3.7 Transient Protection Module

The optional data-line high-voltage Transient Protector Module (Model 6263) should be used outdoors or in areas subject to EMI/RFI to protect personnel and the Miniplex IIIA computer from induced electrical transients in the multiplexed communications. The kit is installed at the input to the computer and wherever the trunk cable enters a building. See Figure 1-7. Refer to Section 3 for installation instructions.

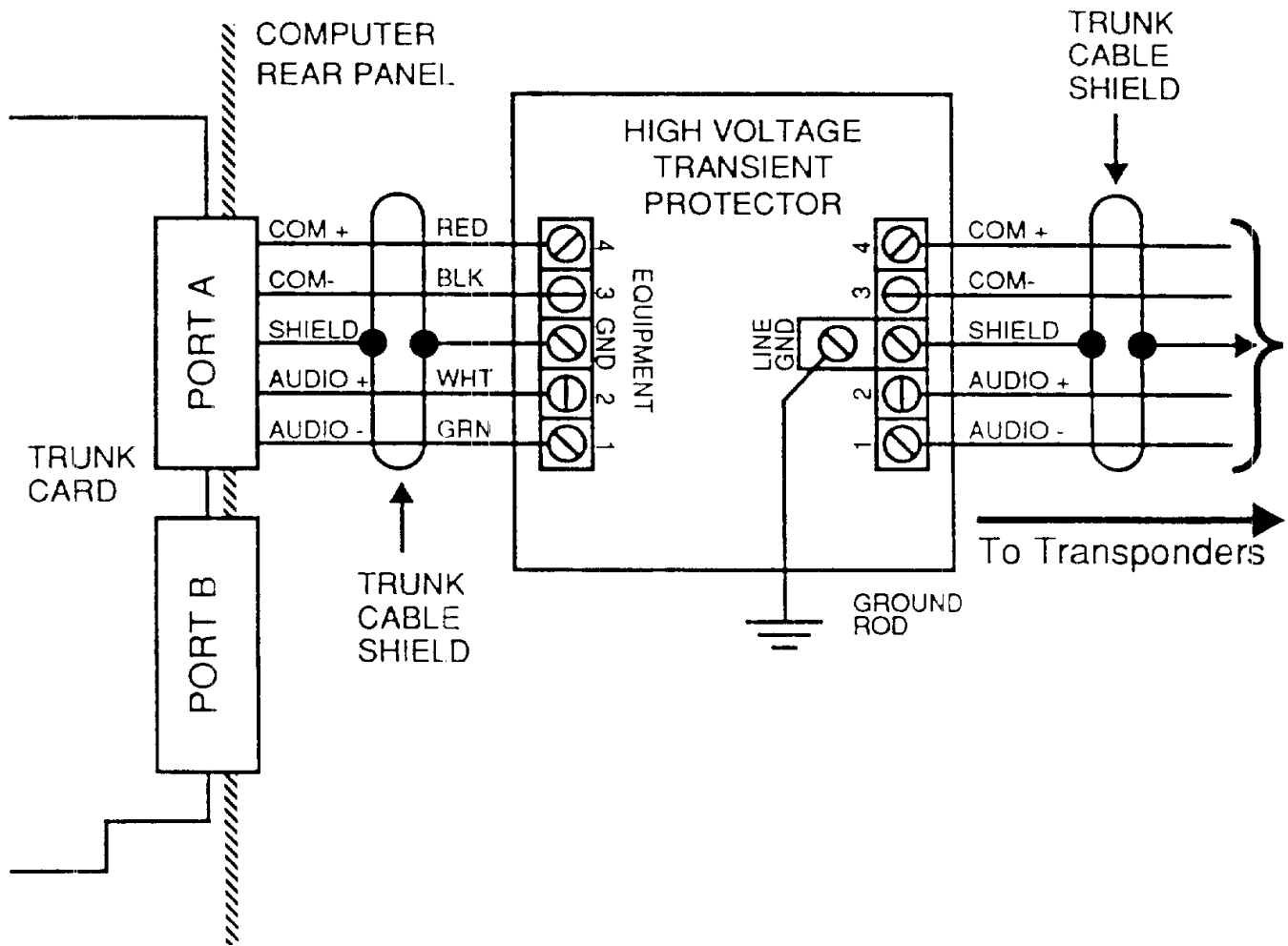


Figure 1-7. Transient Protector Module (Model 6263)



### 1.3.8 Local Maps

The optional local maps (Model MD-104) are designed and manufactured to graphically represent the customer's site (Figure 1-8). Up to 16 local maps can be installed over a maximum of 4000 feet. Local maps can be wall-mounted or rack-mounted. The map addresses are selectable, and are configured at the factory.

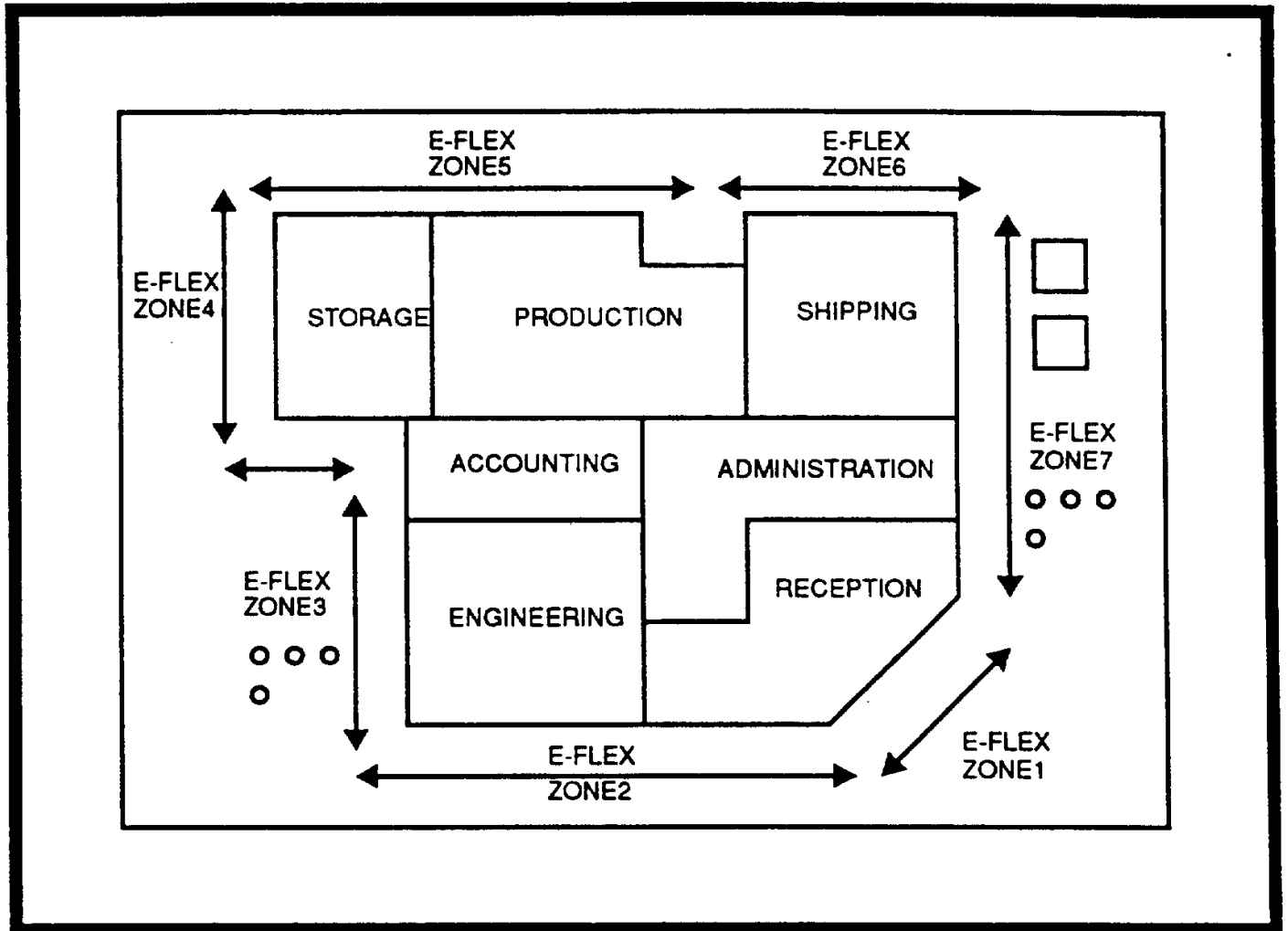


Figure 1-8. Example of a Custom-designed Local Map

Each local map consists of.

- A Map/Relay Interface Controller
- 1 or 2 LED driver cards (32 zones/card)
- Transformer/power cord
- RS-422 cable

It is possible to order maps for an existing Miniplex IIIA installation. The map addresses can be configured in the computer at the time that the maps are installed. However, when access to the computer interior is necessary the work should be performed by a trained technician. Please contact the factory before performing this type of work.

### 1.3.8.1 Local Map LEDs

When used with the Miniplex IIIA computer, maps can display the status of up to 64 zones. Each zone can be represented by up to four LEDs. The computer controls which LEDs are on or off. The colors of the LEDs are customer definable; however, the usual colors are shown in Table 1-1.

**Table 1-1. LED Status**

Status of Zone	Usual Color	Behavior of LED's
Secure	Green	LED On Steady
Comm Error	Yellow	LED Flashing
Access	Yellow	LED On Steady
Alarm	Red	LED Flashing
ACK Alarm	Red	LED On Steady
Tamper	Red	LED Flashing
ACK Tamper	Red	LED On Steady

The LED zone assignments is fixed in the hardware. Site specific configuration is accomplished by wiring appropriate outputs to the desired LEDs.

### 1.3.8.2 Local Map Communications

An RS-422 interface is used for map/computer communication. An RS-422 port is added to the computer if the local maps are ordered with the system. The computer sends a status message to the map/relay interface controller on the map. If the message is valid and accepted, the map returns an ACK message to the computer to acknowledge the status message and lights the appropriate LEDs. Otherwise, the map will send a NAK message to the computer and the computer will send the message again. If communication between computer and map is lost, the computer will display a failure message. If one in a series of maps is disabled, it will not affect communication with the other maps.

---

**Note:** When the Map/Relay Interface card is used for a map interface, the DIP switches are set at the factory to function in this capacity.

---

### 1.3.9 Mobile Maps

The optional mobile maps (Model MD-32) are similar to local maps, but are designed specifically for use in vehicles. Mobile maps are custom designed for each customer site and can visually represent up to 32 alarm zones. Typically they include buildings and other landmarks to assist the vehicle operator in locating the source of an alarm. As security personnel travel around a secured site, the mobile map will display the site status. If a breach of security occurs, it is indicated on both the local map and the mobile map, so that the mobile security personnel can investigate at once.

Any changes in the site security system are encoded and passed from the system computer to a radio transmitter for transmission to the vehicle. The mobile map is connected to the vehicle radio, and displays any zone status changes. A security system can include any number of mobile maps.

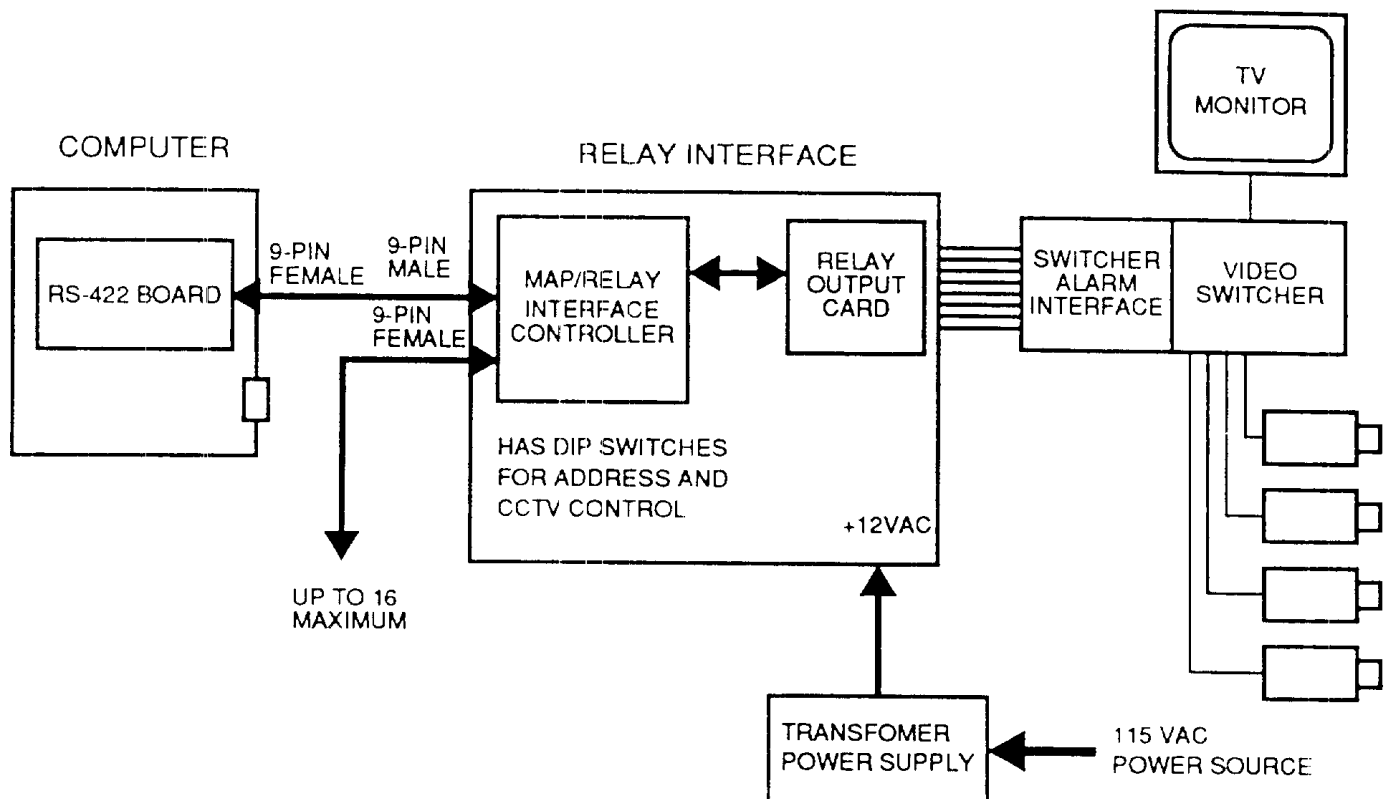
The computer communicates with mobile maps using an RS-232 interface. The computer sends status messages to an RS-232/radio interface card that converts data signals for transmission to the base radio. The Stellar or customer-supplied base radio transmits the data to the mobile vehicle radios. The mobile vehicle radio receives map status messages which are, in turn, displayed on the mobile map.

Request to send (RTS) and clear to send (CTS) RS-232 signalling prevents transmission while a radio is being used for voice transmission. Periodically the computer sends a refresh status message to the mobile maps, so that any new vehicles operating at the site will receive updated information at once. Duplicate message transmissions prevent the loss of any alarm messages.

The maps are illuminated for night operation in the vehicles, and have a light-level adjustment on the front panel. Alarm silence and lamp test switches are also provided.

### 1.3.10 Relay Interface

The Miniplex IIIA relay interface can be used to control closed circuit television (CCTV) installations. Up to 16 Relay Output cards, each containing 16 relays, can be used in a system, for a total of 256 relays. Each card operates independently of the other cards, i.e., each card can associate different alarms with different relays. Each relay in the relay interface controller is connected to a separate input on the CCTV switcher alarm interface. The video switcher controls which CCTV camera is turned on or off in response to signals from the computer. See Figure 1-9.



**Figure 1-9- Relay Interface Diagram**

A TV monitor, used to view the areas being monitored by the TV cameras, is connected to the switcher. The TV monitor is installed where it can easily be viewed by the security personnel. Read the manuals shipped with the CCTV cameras, monitor, and switcher. Refer to Section 4 to program the computer for Miniplex IIIA to the relay interface.

The computer, with an RS-422 port installed, sends a status message over the RS-422 cable (up to 4000 feet long) to a Map/Relay Interface Controller. The Map/Relay Interface Controller sends the message, through a Relay Output card, to a video switcher.

The computer is programmed to trigger different relays depending on the types of alarm and status messages received.

The Map/Relay Interface Controller activates relays in response to alarms, or other zone status change activity in a Miniplex IIIA system. The relay interface controller consists of a circuit card, one or more relay output circuit cards, and a power supply circuit card (model MIII-R is in a customized enclosure such as a wall box, or rack-mounted chassis). A low-voltage step-down transformer powers the relay interface power supply circuit card.

The relay interface controller translates digital data from the computer into a format that is compatible with the relay output circuit cards. It also determines which relay(s) will be activated when a zone status change occurs. The determination of which relay is activated is made according to instructions configured by the customer at the time of installation.

The relay interface activates a specific relay in response to a specific zone status change. In this mode of operation, the relay interface remains energized as long as the zone remains in that state. The relay interface deactivates as soon as the operator resets the zone to a different state.

Removable terminal connectors are provided on the relay interface controller for power, relay outputs, and data input from the computer RS-422 port. A ribbon cable connects the relay interface controller to the relay output circuit card(s).

The relay output cards receive commands from the relay controller, which activates each relay according to commands received from the computer. Each relay card includes 16 single-pole, single-throw (SPST) dry-contact relays that are rated at 30 VDC @ 0.5A.

The power supply in the relay interface supplies 12 VDC for the relay output cards. The relay interface unit can be supplied with a rechargeable standby battery. However, it is recommended that the relay interface be connected to the optional UPS power supply for operation during a failure of the primary AC supply.

### 1.3.11 Transponders

The Miniplex IIIA system uses two types of transponders, a Control transponder (Model 6060) and an Audio/Control transponder (Model 6064). Up to 32 transponders can be installed at a site to be monitored by the computer. The transponders can be located up to 4000 feet (1200 m) apart, and they require only a single trunk cable, which eliminates the need to hardwire sensors back to the computer. The 32 transponders can monitor 64 zones (three points per zone), and switch 64 zones of audio assessment data. See Figure 1-10.

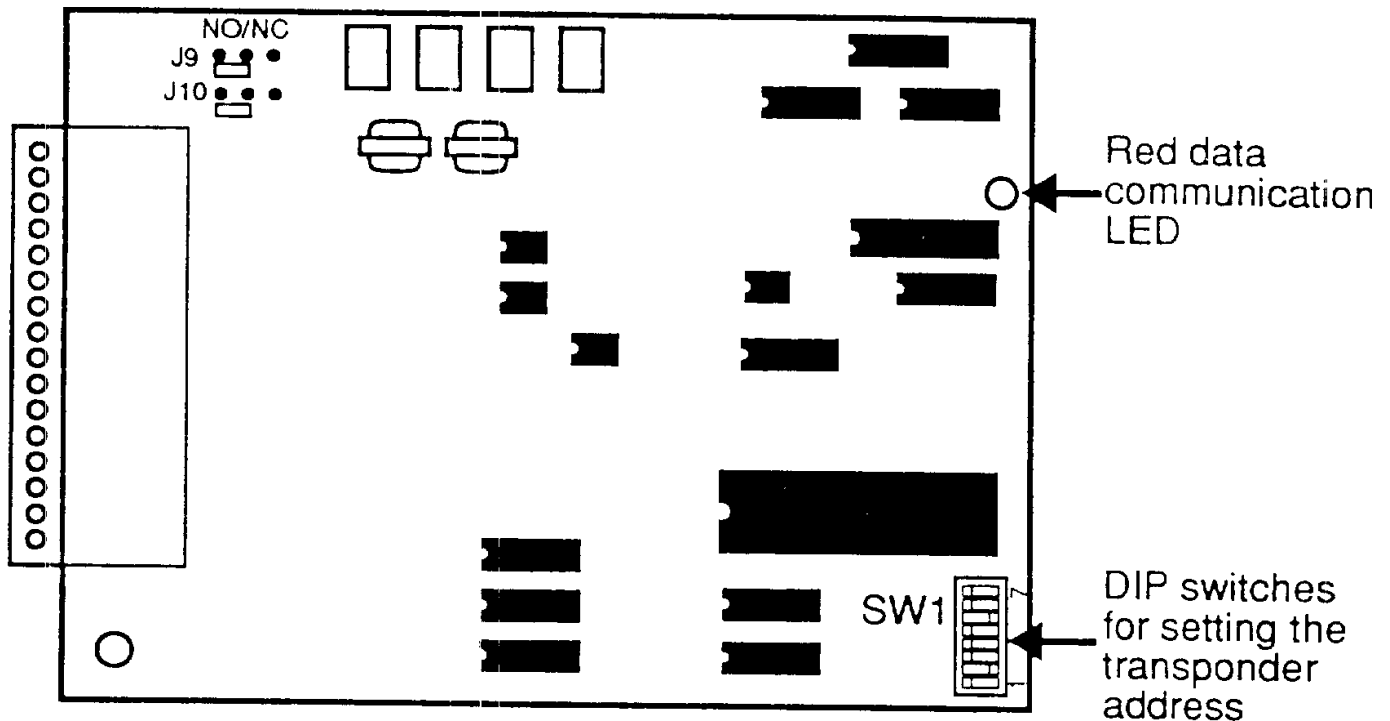


Figure 1-10. Transponder Card

The computer sequentially polls the enabled transponders installed on the trunk cable, by address, about once every second. If a transponder does not respond to a poll, or the transponder address does not match the address sent by the computer, a transponder communications error is generated.

If there is another transponder communication error on that address at the next poll, a communication alarm will be generated. Two sequential communication errors will trigger an alarm. After the operator has acknowledged the alarm and the computer has successfully completed two polls of the transponder, the operator will be able to clear the alarm from the computer monitor screen.

The transponders communicate through the multiplexed trunk cable, which consists of one (no audio) or two (audio) low-capacitance twisted pair wires, individually shielded. Refer to Section 3 for installation interconnection diagram.

### **1.3.11.1 Control Transponder**

A Control transponder (Model 6060) can monitor two zones with three end-of-line resistor (5.11k 1% 1/4 watt) inputs, per zone. It can activate remote contact closures on two relays in response to commands from the system operator. The relay contacts are selectable NO or NC. Each transponder has a unique address, and the DIP switch settings for that address are made, per the site planning diagram, at the time of installation.

### **1.3.11.2 Audio/Control Transponder**

An Audio/Control transponder (Model 6064) can monitor two zones, with three end-of-line resistor (5.11k 1% 1/4 watt) inputs per zone, and can also monitor two audio channels and control two output circuits. The relay contacts are selectable NO or NC. In addition to the capabilities of the control transponder, the Audio/Control transponder can provide audio assessment of sensors with an audio output when a second pair of shielded wires is used. Refer to Section 3 for installation interconnection diagram.





# *Section 2*

## *Installation Planning*

---

### 2.1 General

Before installing the Miniplex IIIA, it is recommended that you review the manuals for the sensors and related peripherals that will be integrated into the system.

All wiring should be carefully diagrammed before installation is started. Consideration should be given to sensor contact and transponder locations, environmental conditions, power sources, and service access. (Refer to Section 2.1.1, *Environmental Specifications*.)

The installer should always adhere to good electrical practices and local codes when installing an electronic system. The electrical enclosures should be grounded, power wiring should be suitable for the intended application, and sensor wiring should be routed away from sources of electrical noise.

Before installing the Miniplex IIIA system hardware, you should:

- design and diagram the zones and complete all site preparation;
- physically place each item of hardware in the location where it will be installed and check it against the site diagram;
- run the trunk cable along the route where it will be installed;
- read the manuals for all of the peripheral equipment to be used with the system (such as the printer manual).

It is important that installation planning be complete and diagrammed in detail, so that the information can be configured correctly in the computer.

---

**Note:** The usefulness of any security system is limited by the physical security afforded the system components. Keep the system diagrams, wiring diagrams, and equipment locations confidential.

---

### 2.1.1 Environmental Specifications

<b>Computer, Keypad, Monitor, Printer, Map, Trunk</b>	Temperature: Humidity: AC frequency:	16° to 32° C 20 to 80% 50/60 Hz
<b>Computer, Printer</b>	AC input voltage:	115 or 230 VAC
<b>Keypad, Monitor, Map, Trunk</b>	AC input voltage:	115 VAC
<b>Transponders</b>	Temperature: Humidity: Input contact points:  Audio:  Control output relay: Power: Power Supply/ Battery Charger:	-30° to +70° C < 95% < 5000 pF to earth ground > 2 Meg to earth ground < 1K closed contact 600 ohm, < 10 V p-p, may be ground reference 2 Watt max, 28 VDC @ 0.2 A 9 VDC - 14 VDC @ 0.125A  120 VAC / 60 Hz
<b>Cable</b>	Temperature: Indoor: Outdoor:	-20° to +80° C Intended for indoor use Requires conduit

## 2.1.2 Trunk Cable Requirements

The communication system requires a single twisted shielded pair, 22 awg, 62 pf/ft or less, teflon insulated. For audio use, the system requires dual twisted pair, individually shielded, Belden 88723 or equivalent.

The Miniplex IIIA is configured with one trunk card, which contains two connectors for trunk cable attachment. The trunk cable need not be run in one continuous length throughout the site. The cable can be divided into two segments, and each attached to the trunk card using port A and/or port B at the rear of the computer. When the maximum number of transponders (32) are attached to the trunk cables, and are a maximum of 4000 feet apart, the Miniplex IIIA can service an area up to 18 miles in length.

The multiplex wiring should never be installed in a common conduit or within 18 inches of any intercom, AC power, or other electrical wiring. The multiplex digital data pulses may create electrical interference with adjacent wiring. You should provide drip and service loops for equipment installed outdoors or in electrical equipment enclosures.

## **2.2 Installation Plan**

### **2.2.1 Hardware Location**

Physically place each item of hardware for the system in the desired location. Always locate transponders as close as possible to their associated sensor points. Any surface on which equipment is to be mounted should be clean and free of moisture and corrosion. Check the hardware location against the site diagram to be sure that no system components are missing.

Systems installed in hot climates should be adequately ventilated. To prevent moisture in system components, weather seals and desiccant should be used. If environmental conditions exceed the ranges specified in section 2.1.1 of this manual, please contact the manufacturer for information about equipment available for extreme climatic conditions.

### **2.2.2 Transient Protection**

In an outdoor or high-voltage environment, a data-line high-voltage Transient Protector Kit (Model 6263) helps protect the personnel operating the system and the system components. The kit is installed at the input to the computer and wherever the trunk cable enters a building. Check the location of the Transient Protection Kit against the site diagram to be sure of proper location.

### **2.2.3 Transponder Locations**

Each transponder can monitor one or two zones. Always position the transponders as close as possible to their associated sensor points and the local source of power.

Both Control transponders as well as Audio/Control transponders are designed for indoor or outdoor installations. When installed outside, they can be protected from climatic conditions if mounted on the inside cover of an E-Flex Control Unit (Model 6000) or other suitable NEMA 4 enclosure.

The Trunk card, mounted in the computer, communicates with the transponders attached to the trunk cable. When the transponders are positioned for installation, you must assign each an address by setting the DIP switches on each transponder. In general, it is best to assign the "lowest" address (i.e., zero) to the transponder closest to the computer. Be sure to note the addresses on the site diagram for later computer configuration.

### 2.2.4 Transponders Standby Power

If backup power is required at the transponders, it can be supplied from a central +12VDC source or local batteries and chargers.

### 2.2.5 Audio Bandwidth

The desired audio bandwidth (3 db down) for a site may be accomplished by selecting the proper length and type of cable for the number of transponders with audio inputs. The lower cutoff frequency is determined by the number of audio transponders, and it varies between 10 KHz for one audio transponder to 300 Hz for 32 audio transponders.

A graph of the upper cutoff frequency is shown in Figure 2-1.

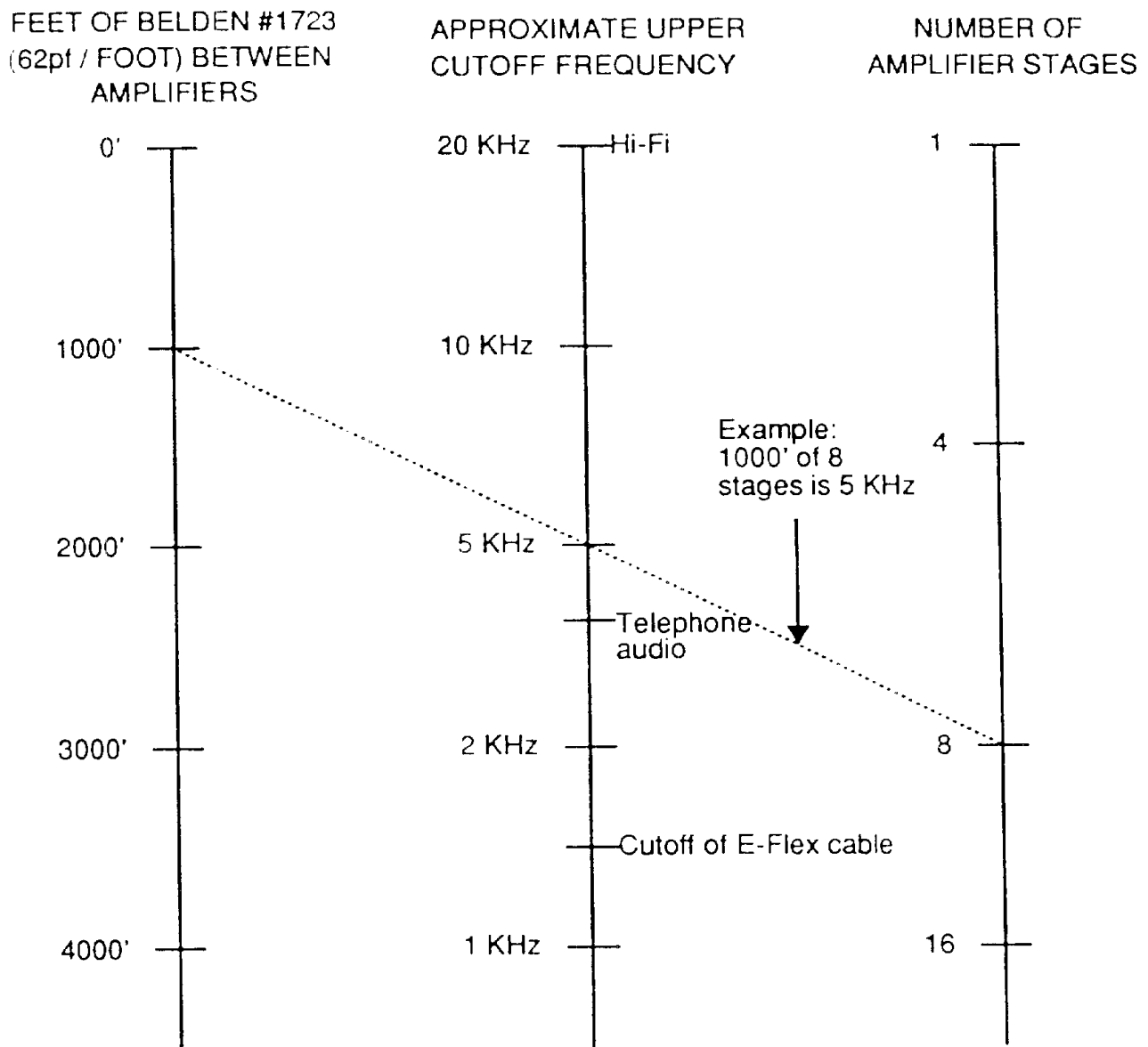


Figure 2-1 Audio Bandwidth

The number of amplifier stages in series is a point on the 3rd column. The average feet of cable between amplifiers is determined and located on the first column. This is the appropriate audio upper cutoff frequency of the system. To increase this bandwidth, larger diameter cable could be selected. Note that the bandwidth of telephone system is typically 300 to 3300 Hz. The E-Flex II sensor audio bandwidth is 300 to 1500 Hz.

### 2.2.6 Local Map Interface

When including custom-designed local maps in a Miniplex IIIA system, it is necessary to install a Map/Relay Interface card in the computer. The computer can communicate with a total of 16 local maps via an RS-422 cable. You should plan the map locations and indicate them on the site diagram.

### 2.2.7 Relay Interface

When including relay interface capability in a Miniplex IIIA system, it is necessary to use an MIII-R Relay Interface. The MIII-R interfaces a Map/Relay Interface Controller and its associated Relay Output cards (with 16 relays on each card) and communicates with the computer via the RS-422 cable. The location of the MIII-R is governed by the length of the RS-422 cable to the computer.

---

**Note:** Local map controllers and relay controllers can exist on the same RS-422 cable, however, they require different addresses.

---

### 2.2.8 Mobile Map Interface

When including mobile maps in a Miniplex IIIA system it is necessary to include a Mobile Map Interface card. The computer communicates with the Mobile Map Interface card via the RS-232 cable. The Mobile Map Interface card communicates with the radio transmitter, which in turn transmits to the remote radios in the patrol vehicles. The vehicle radio receives status messages transmitted from the base radio and passes them to the mobile map in that vehicle. The status messages sent from the computer update the mobile maps periodically, and when a change of status occurs on any system point.

### **3.1 Section Contents**

This section contains a detailed explanation of the installation procedure for the Miniplex IIIA system. The following topics are covered:

- Unpacking and verifying shipment contents
- Opening and closing the computer
- Installation of the following components:
  - Computer
  - Map/Relay Interface Card
  - Trunk card
  - Speaker module
  - Printer
  - Transponders
  - Trunk cables
  - High-voltage Transient Protector Kit
  - Sensors
  - Local maps
  - Mobile map interface
- Setting of the following switches:
  - Password on the Trunk card
  - Transponder addresses
- Verifying the installation

## 3.2 Unpacking the Equipment

1. The Miniplex IIIA system is shipped in several containers. Open the containers and verify that the contents are undamaged, then move them to the location where they will be used by security personnel to perform system monitoring. The location must have a standard *115VAC* (or *230VAC*) socket, and adequate lighting and ventilation.

---

**Note:** See Section 2.1.1, *Environmental Specifications*, for a complete list of environmental requirements.

---

2. Verify each container against the shipping list attached to the outside of the shipment to be sure all of the equipment has arrived.
3. After opening each container, inspect its contents. Look for open boxes, scratches, cracks, or other damage. If a piece of hardware is suspect, but is not obviously damaged, note it and continue with the installation. Report any damage immediately to Stellar Systems and the shipping company.

---

**Note:** Please refer to the limited warranty at the front of this manual.

---

4. Each container uses foam, styrofoam, or blister sheets as protective packing material. Open each container and remove the contents. Remove any attached packing material. Retain the container in case it should ever be necessary to store or ship the equipment.



### 3.2.1 Verifying Shipment Contents

Depending on what you purchased, the following items will be in the shipping containers. Check this list against the shipping list and verify that you have received all items required. If there is any problem, please contact Stellar Systems.

#### Standard Equipment

- Computer with:
  - power cord
  - cables
  - documentation
- Trunk card (inside computer)
- 6017A Keypad
- 6060 Control Transponder(s)
- 6064 Audio/Control Transponder(s)
- 00893-025 9-pin connector assembly
- 6263 Transient Protector Kit(s)
- 6020 data cable

#### Optional Equipment

- Map/Relay Interface card (inside computer)
- MD-104 Map Display with 12VDC power supply
- MD-32 Mobile Map Display with 12VDC power supply
- 6010 Speaker Module
- PR- 104 Logging Printer with:
  - cables
  - documentation set
- Audio Level Tone Generator
- Rack mounted CPU

## 3.3 Installation Overview

### 3.3.1 Tools Required

Unpacking and installing the Miniplex IIIA system will require tools to uncrate items, and a variety of tools associated with light electrical work such as:

- Tone generator (if audio capability is used)
- High impedance voltmeter (VTVM)
- 1/8" flat blade screwdriver
- 1/8" phillips screwdriver
- Adjustable wrench
- Needle-nose pliers
- Diagonal cutter
- Wire crimper and stripper
- Low wattage soldering iron

### 3.3.2 General

To have your Miniplex IIIA system installed as quickly as possible, perform the procedures described in the following pages in the sequence in which they are presented.

---

**Warning:** Do not apply power to any components of the Miniplex IIIA until directed to do so or you could damage the equipment.

---

1. Physically place each item of hardware in the location where it will be installed and check it against the site diagram.
2. Be sure that the computer power switch is off. See Appendix B for detailed information on the computer.
3. Install the Map/Relay Interface card and/or the Trunk card (if necessary). See the following sections:
  - Section *Opening and Closing the Computer*, Appendix B.
  - Section 3.4, *Trunk Card Installation*.
  - Section 3.5, *Map/Relay Interface Card Installation*.

---

**Note:** The Map/Relay Interface card and Trunk card are normally installed in the computer before the system is shipped.

---

4. Set the voltage selector switch and connect the power cord. See Section *Computer Power Installation*, Appendix B.
5. Connect the Keypad. See *Connecting the Keypad*, Appendix B.
6. Connect the optional Speaker. See Section 3.6, *Speaker Module Installation*.
7. Connect the optional printer. See Section 3.7, *Printer Installation*.
8. Install the HV Transient Protector Module(s) and ground rod(s). See Section 3.8, *High-Voltage Transient Protector Installation*.
9. Attach the Trunk cables. See Section 3.9, *Trunk Cable Installation*.
10. Install the Transponders. See Section 3.10, *Transponder Installation*.
11. Set the Transponder addresses. See Section 3.11, *Setting Transponder Addresses*.
12. Install the Sensors. See Section 3.12, *Sensor Installation*.
13. Install the optional Local Maps. See Section 3.13, *Local Map Installation*.
14. Install the optional Mobile Maps. See Section 3.14, *Mobile Map Installation*.
15. Install the Map/Relay (optional). See Section 3.15, *Map/Relay Installation*.
16. Verify and complete the installation. See Section 3.16, *Verifying the Installation*.

### 3.4 Trunk Card Installation

Before installing the Trunk card in the computer, you have the option of setting a site password. If you wish to use the password set at the factory, then skip this section.

#### 3.4.1 Setting the Site Password

The password feature of the Miniplex IIIA prevents unauthorized persons from accessing the site configuration screen. The password has been set at the factory to 4300. If you wish to select your own password, the 4-position DIP switch (SW1) on the trunk card in the computer can be reset. Your new password will be generated by the switch position numbers, as illustrated in Figure 3-1.

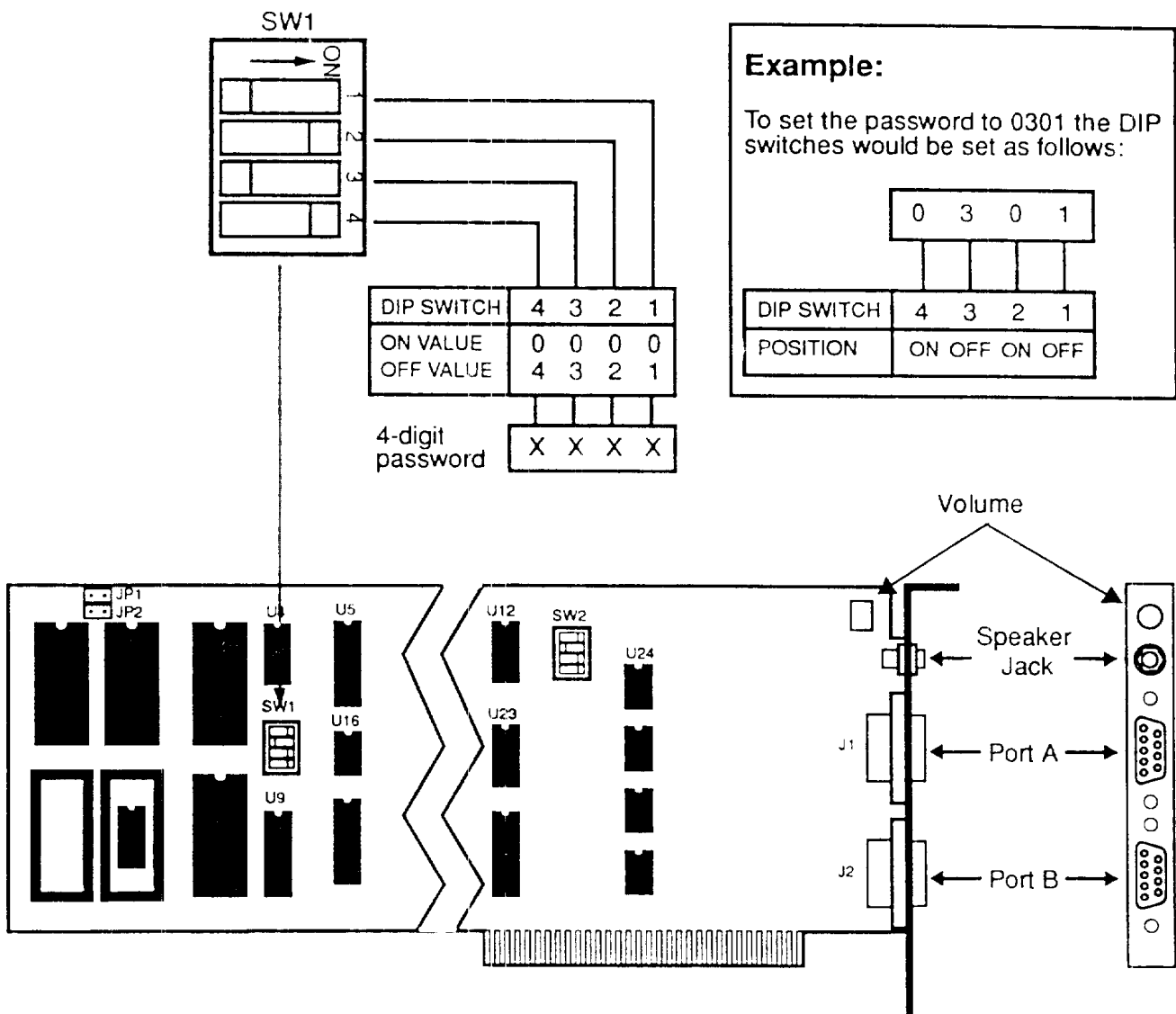


Figure 3-1. Trunk Card Showing the Password DIP Switches

1. Locate SW1 on the Trunk card.
2. Choose the four-digit password desired, for example: 0301
3. Set the switches according to the table in Figure 3-1.

### **3.4.2 Installing the Card**

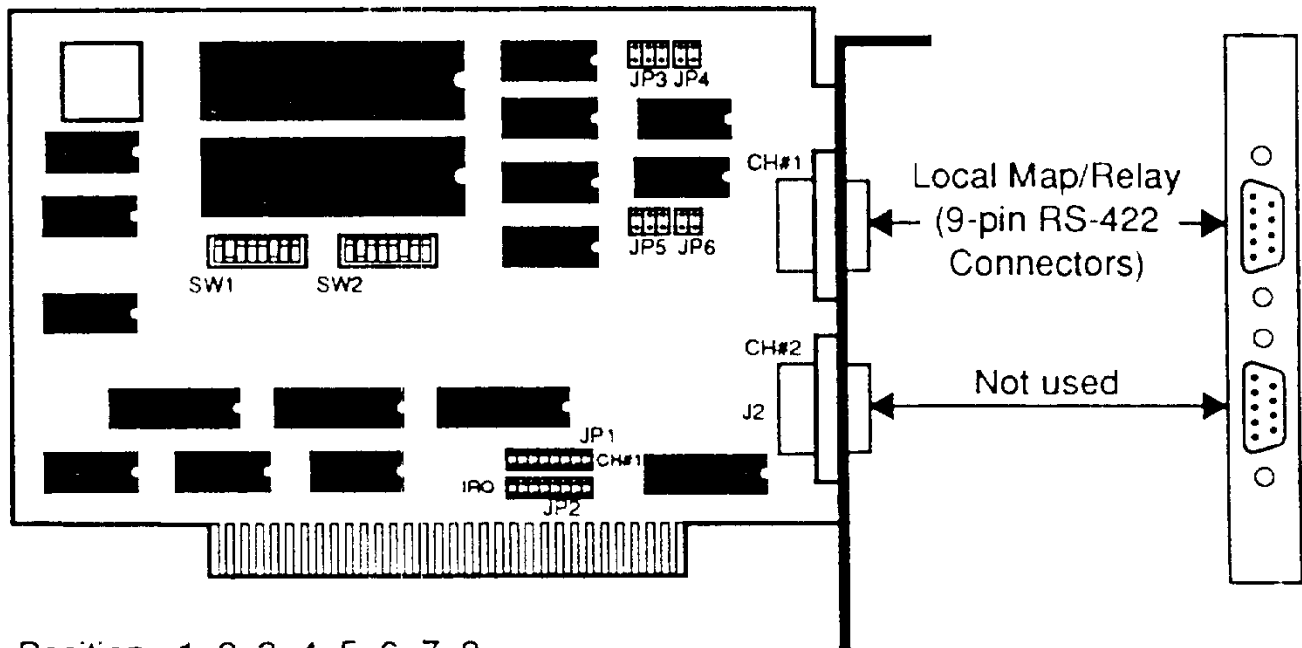
The Trunk card for the Miniplex IIIA is usually factory installed before it is shipped to the customer. Stellar recommends that this card be installed by trained personnel. If required, call Stellar Systems for assistance.

### 3.5 Map/Relay Interface Card Installation

If optional maps are ordered, the Map/Relay Interface card (Model 6200) is usually installed in the computer before being shipped to a customer. The Model 6200 is an RS-422 serial port card that the computer uses to communicate with the maps.

#### 3.5.1 Setting the DIP Switches

The serial port card is identified as PCL-743. The switches on the card should be set as shown in Figure 3-2.



Position	1	2	3	4	5	6	7	8
SW1	0	0	0	1	1	0	0	1
SW2	0	0	0	0	0	1	0	1

CH1 IRQ6  
 CH2 IRQ7

JP3 = JP4 = JP5 = JP6 = ON

NOTE: ON = 0, OFF = 1

Figure 3-2. Map/Relay Interface Card

### 3.5.2 Installing the Card

The Map/Relay Interface card for the Miniplex IIIA is usually factory installed before it is shipped to the customer. Stellar recommends that this card be installed by trained personnel. If required, call Stellar Systems for assistance.

---

**Note:** For detailed instructions on installing a card in the computer, please refer to the set of computer manuals shipped with the Miniplex IIIA.

---

1. Open the computer if it is not already open, after first making sure that the power is off. See *Opening and Closing the Computer* in Appendix B.
2. Locate the bus connectors used for expansion cards.
3. Remove the screw holding the bracket that covers the opening in the computer rear panel. Remove the bracket and store it.
4. Plug the 32-pin edge connector of the Map/Relay Interface card into the bus slot, making sure that the card is firmly, seated.
5. Replace the screw to secure the bracket containing the two RS-422 9-pin connectors to the opening in the computer rear panel.
6. Close the computer. See *Opening and Closing the Computer* in Appendix B.

### 3.6 Speaker Module Installation

For systems with audio assessment capabilities, connect the optional speaker module (Model 6010) to the speaker jack on the Trunk card (See Figure 3-3). Mount the speaker on an adjacent wall, or place the speaker on a surface near the computer within hearing distance of security personnel. The volume of the speaker is adjusted by the volume control on the Trunk card to the right of the speaker jack.

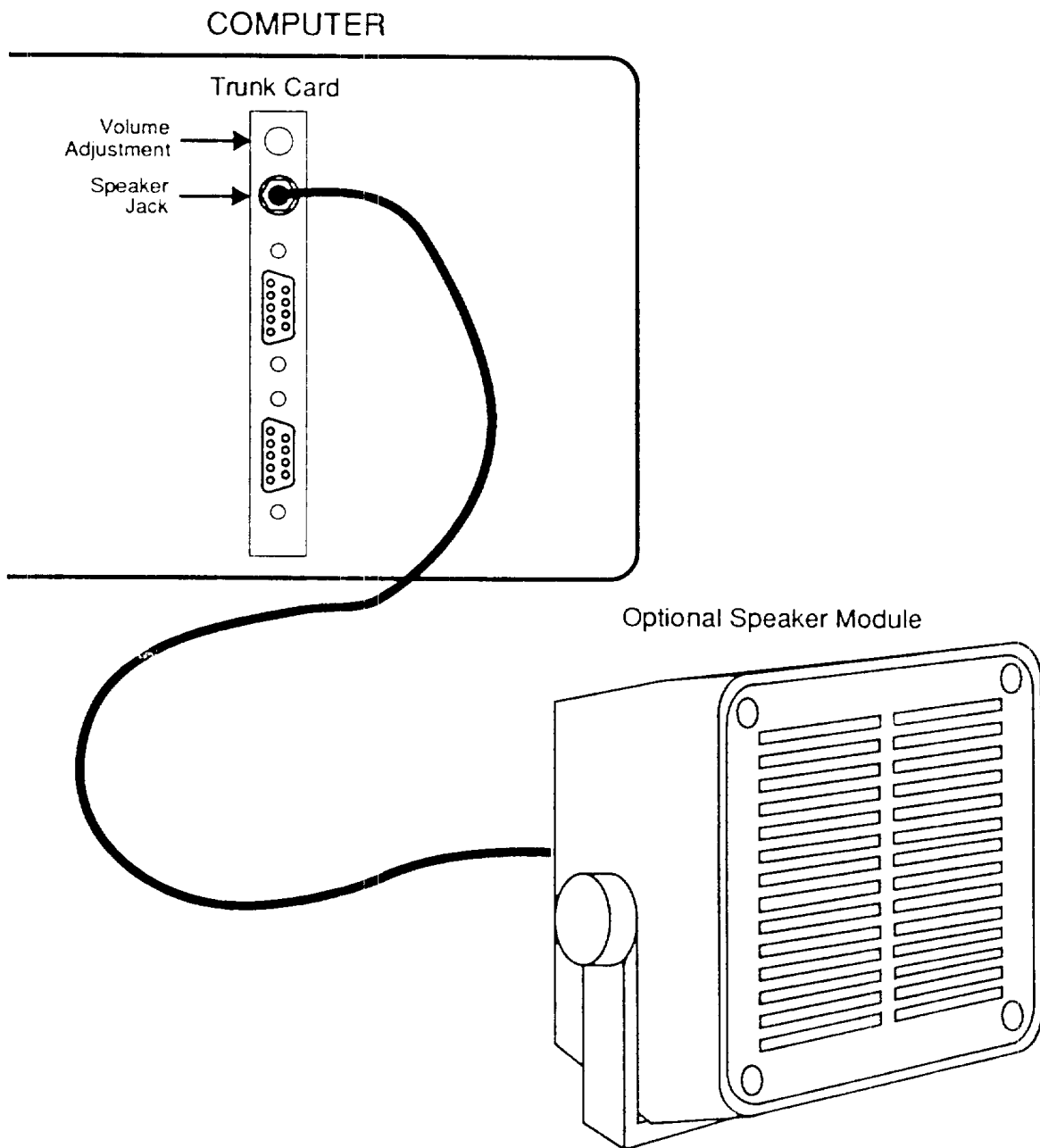


Figure 3-3. Speaker Module Installation



### 3.7 Printer Installation

1. Position the optional parallel printer (model PR-105) recommended for use with the system near the computer so that the printer cable can reach the computer rear panel.

---

**Note:** Before installing the printer please read the manual supplied by the printer manufacturer.

---

2. After the printer is assembled as per the instructions in the printer manual, plug the printer power cord into a properly grounded electrical outlet (See Printer Installation Figure in Appendix B).
3. Plug the parallel interface cable into the 25-pin parallel connector on the printer.
4. Squeeze the wire clips together until they lock in place on either side of the centronics connector on the printer rear panel.
5. If the cable has a ground wire, connect it to the ground screw beneath the interface connector on the printer rear panel.
6. Plug the other end of the interface cable into the print port on the computer rear panel.
7. Turn on the printer.
8. See Section 4 for instructions on configuring the computer for printer control.

### 3.8 High-Voltage Transient Protector Installation

A High-Voltage Transient Protection Module (Model 6263) is required if cables exit a building. The module should be placed in a moisture proof enclosure, or mounted on an inside wall. If more than one segment of trunk cable is used, or both trunk port A and port B are used, then a second transient protection module will be required for the second bus and the audio circuit. Comply with local electrical grounding codes, and refer to Figure 3-4 for installation wiring information.

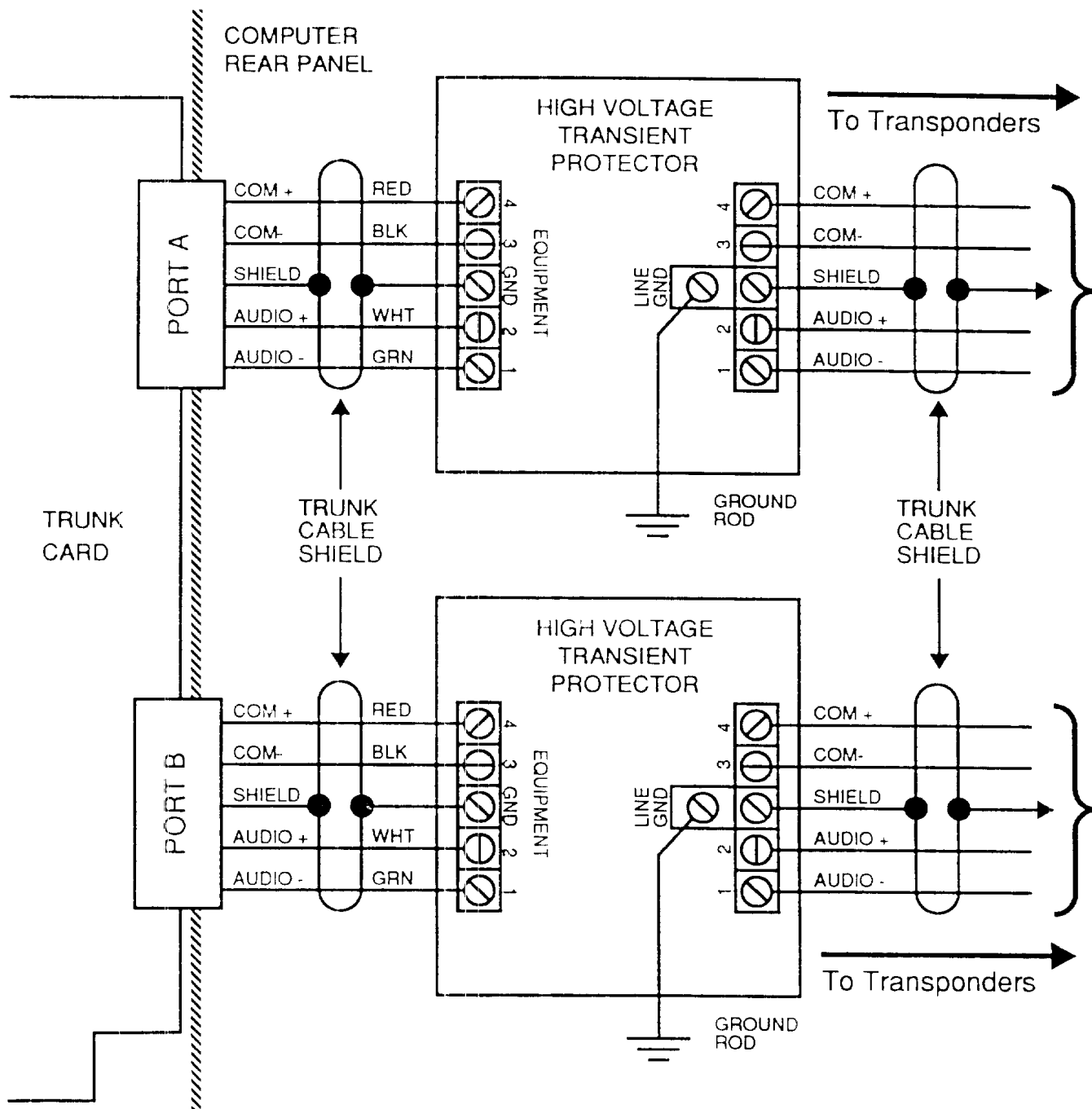


Figure 3-4. High-Voltage Transient Protector Installation Diagram: Dual Trunk with Audio

1. Use cable-assembly (6263-001) with a 9-pin connector, to connect the transient protector to the rear panel of the computer.
2. Add crimp to the cable assembly and leads and then connect the cable assembly to the transient protector module as indicated in Figure 3-4.
3. Connect the trunk cable to the transient protector as indicated in Figure 3-4.
4. Connect the transient protector ground screw to a local earth ground in compliance with all applicable local electrical codes.

When two trunk cable segments are installed in a site without the audio assessment option, it is possible to avoid the expense of the second transient protector.

1. Fold back the audio wires (white and green) on both trunk cable segments.
2. Attach the communication wires (red and black) of the second trunk cable to the transient protector in place of the audio wires.
3. Attach the communication wires from the connector cable off port B to the transient protector on terminals 1 and 2. Refer to Figure 3-5.

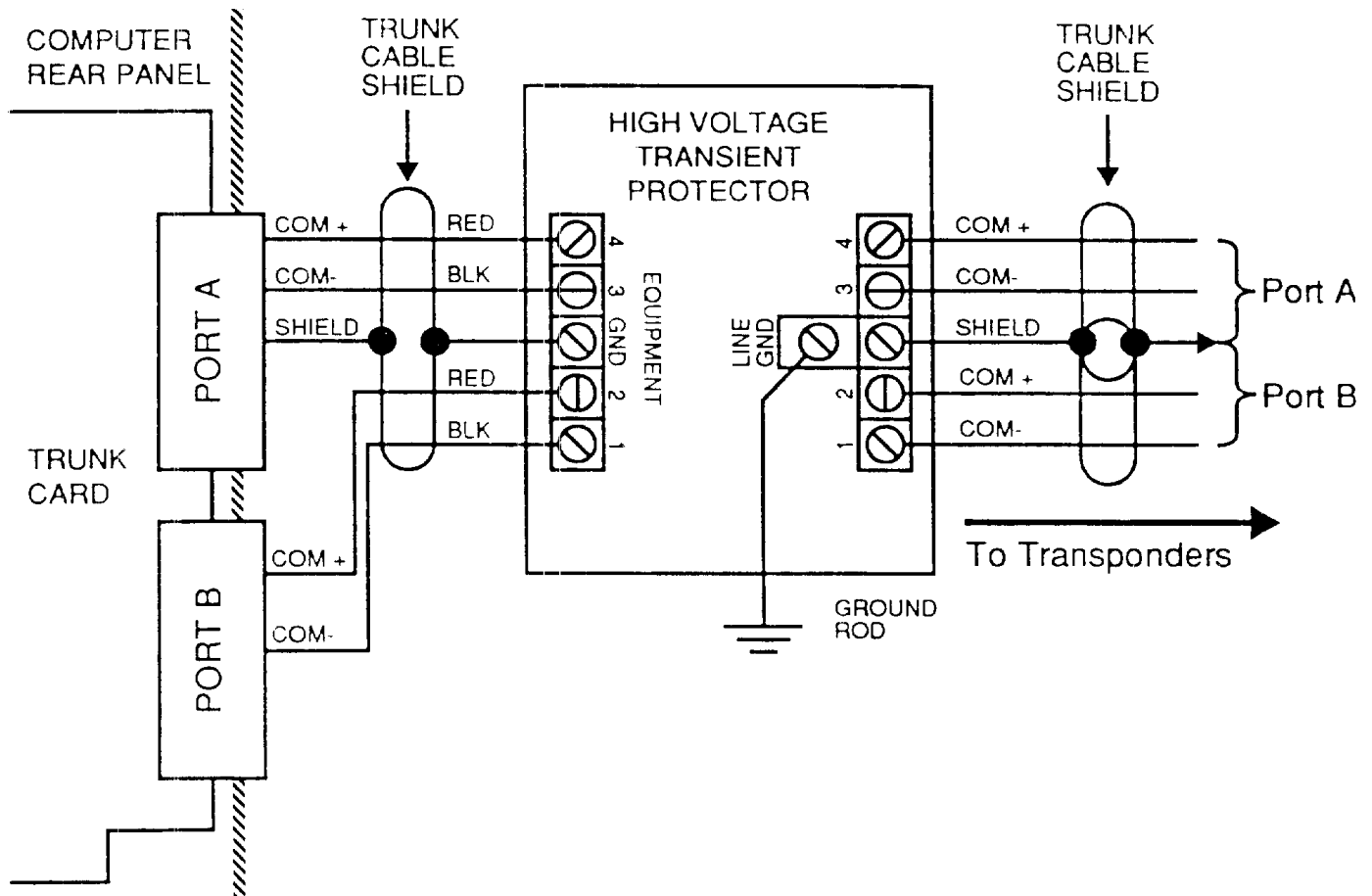


Figure 3-5. High-Voltage Transient Protector Controller Diagram, Two Trunks without Audio

### 3.9 Trunk Cable Installation

1. Begin trunk installation near the computer.
2. Unreel the trunk cable along each zone as diagrammed, making temporary ties as required to protect the cable.
3. After the trunk cable has been loosely attached along the diagrammed.
4. Attach the high-voltage Transient Protector(s). Refer to Section 3.8, *High-Voltage Transient Protector Installation*.
5. Attach cable assembly (6263-001) to the High-voltage Transient Protector(s) and plug the other end into port A or port B on the rear panel of the computer. See Figures 3-6 and 3-7.

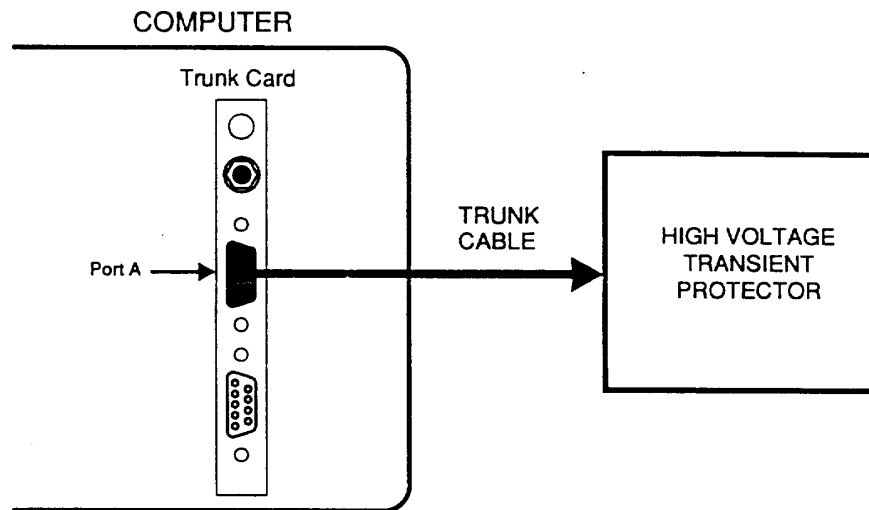


Figure 3-6. Trunk Cable Connection to Computer

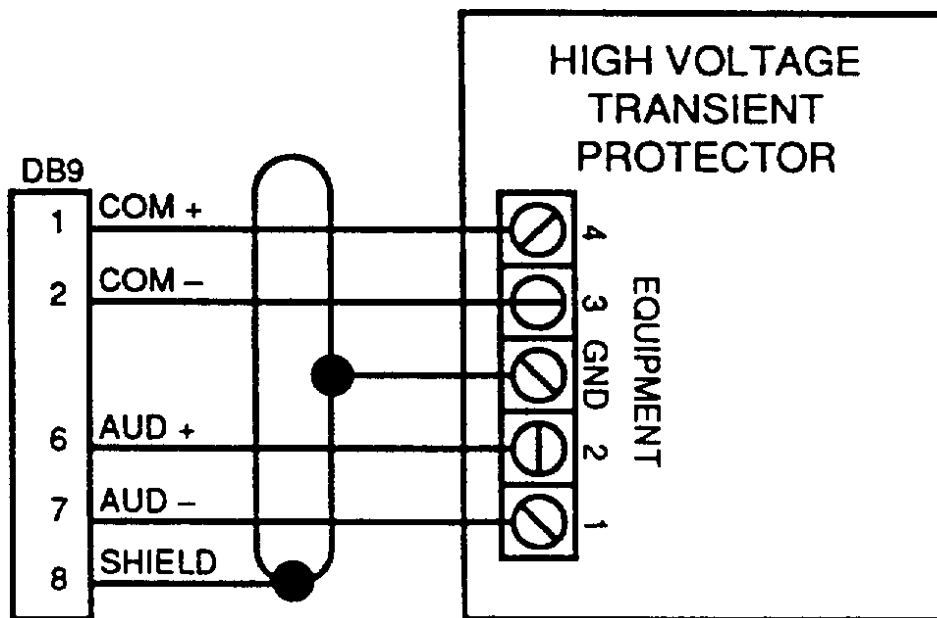


Figure 3-7. Trunk Cable Pinouts

### 3.10 Transponder Installation

Transponders should be installed near the sensors to which they are connected. Both Control transponders and Audio/Control transponders are installed in the same way. The Audio/Control Transponders use an extra pair of wires for audio transmission. The transponders are attached to the trunk cable as shown in Figures 3-8.

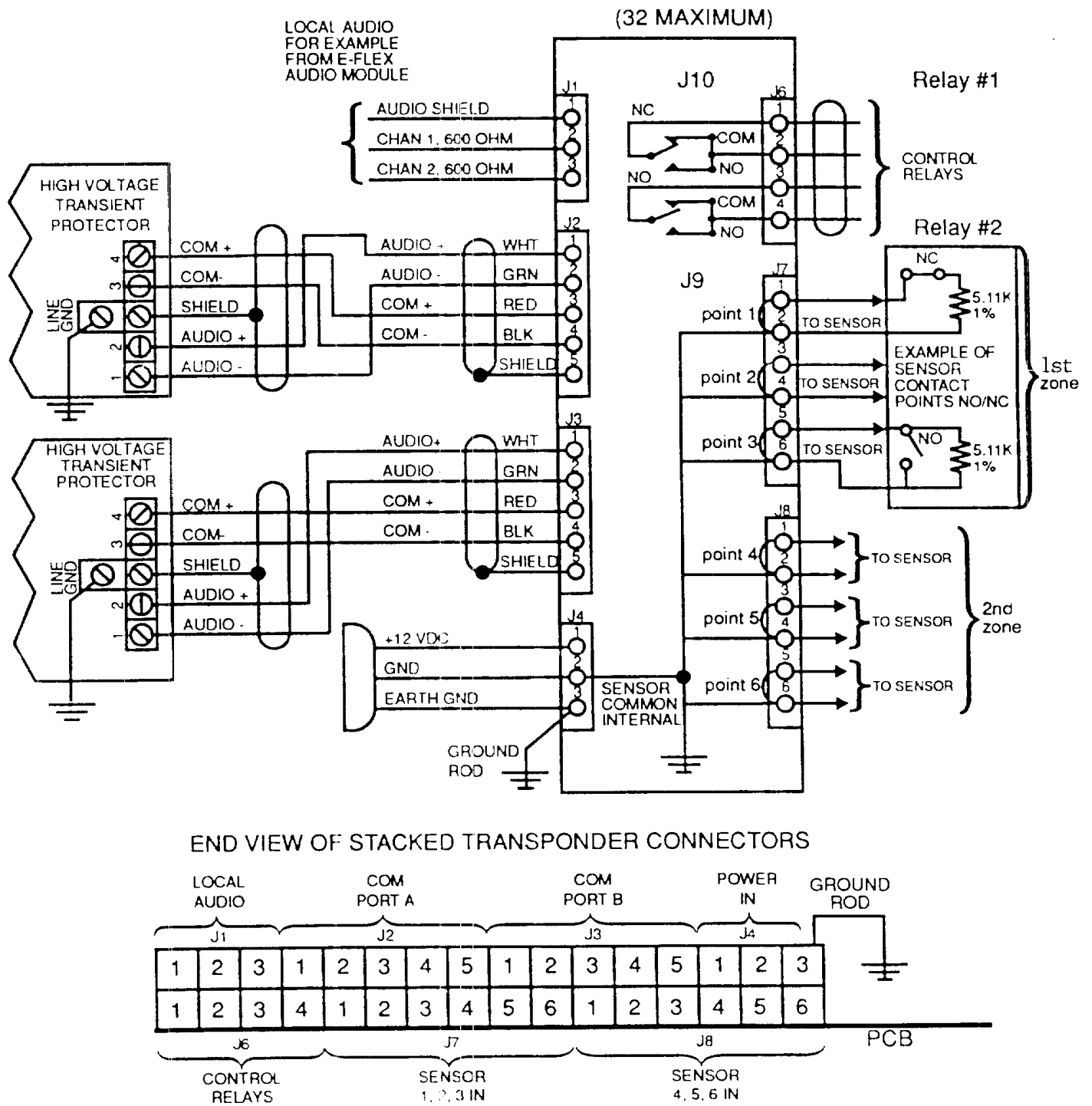


Figure 3-8. Transponder Installation Wiring Diagram

### 3.11 Setting Transponder Addresses

Up to 32 transponders can be installed at a site to be monitored by the computer. Each transponder must have a unique address. The address must be set between 0 and 31 using the DIP switches on the card. The address of the transponder closest to the computer should be 0. The transponder farthest away should have the highest address. The addresses are set according to the table in Figure 3-9.

For best audio assessment performance, install one half of the transponders on each port. This also minimizes system vulnerability to communication line problems.

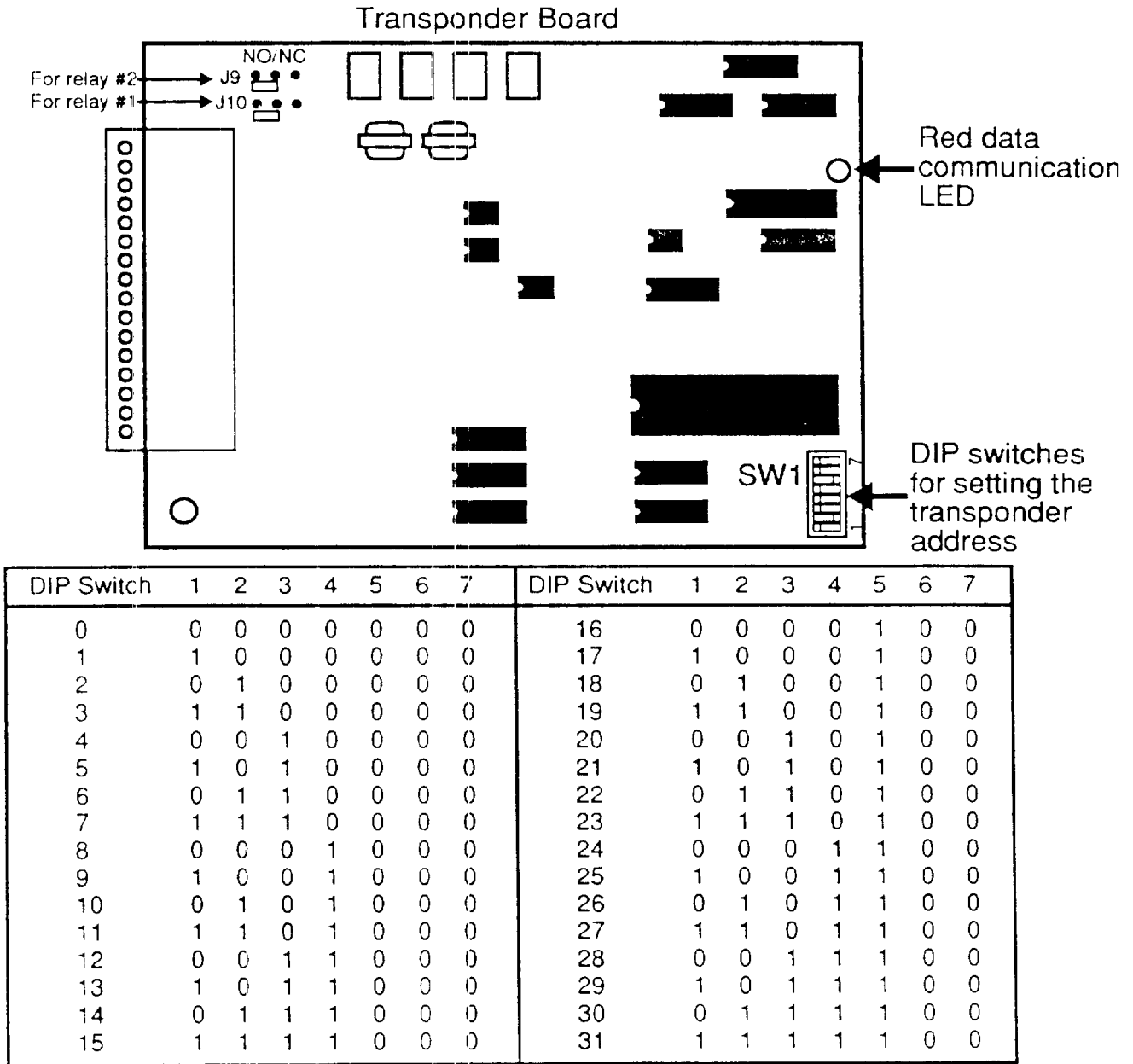


Figure 3-9. Setting Transponder Addresses;

### 3.12 Sensors Installation

Before installing E-Flex II cable sensors, H-Field buried line sensors, or any other compatible sensors, carefully read the sensor installation manuals and follow the installation instructions contained in those documents.

### 3.13 Local Map Installation

Up to 16 local maps (Model MD-104) can be installed over a maximum of 4000 feet. For cable lengths greater than 1000 feet (300 m), or where the cable exits a building, a transient protector and ground rod should be used to protect personnel and equipment. (Refer to Section 3.8). Local map(s) can be wall or rack mounted. The computer communicates with local maps through a map/relay output card in the computer, a map/relay interface controller card mounted in the map(s), and a 4-wire shielded RS-422 cable. If local maps have been ordered for the site, the map address(es) are set using the DIP switch on the relay interface controller mounted on the map. The addresses are normally set at the factory before shipping, but can be reconfigured by the customer.

If a local map is disabled, the communication cables can bypass that map. Communication can continue with other maps in the system until the disabled map is repaired.

1. Mount the local map to a wall (or rack) in the desired location. See Figure 3-10 for a block diagram of the Local Map interface.

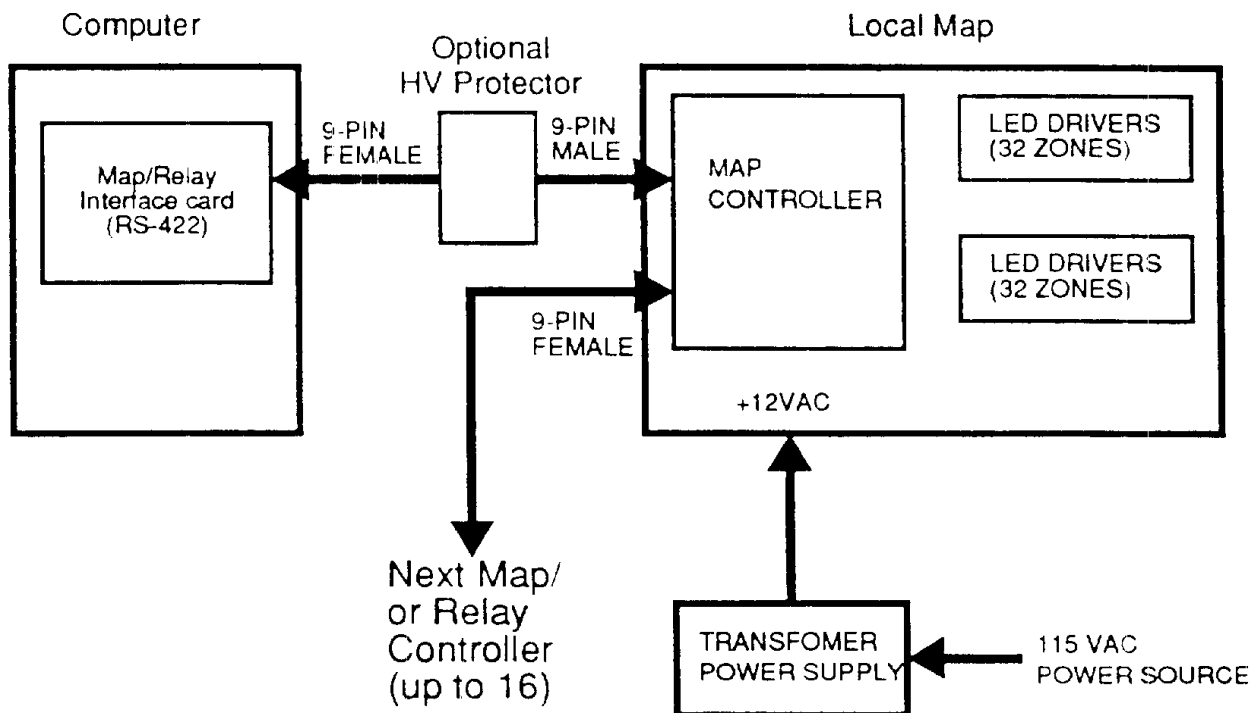


Figure 3-10. Local Map Interface Diagram

2. Attach the RS-422 cable from the computer, through a transient protector, to the map controller of the map.
3. Record the address of the map for later configuration in the computer.
4. Plug the map power cord, with a 12VDC transformer attached, into a local 115/230 VAC power source.
5. If more than one map has been configured for the site, connect the map cable to the next map and perform the same configuration procedure for each map.
6. Refer to Section 4 to configure the computer for local map interface.

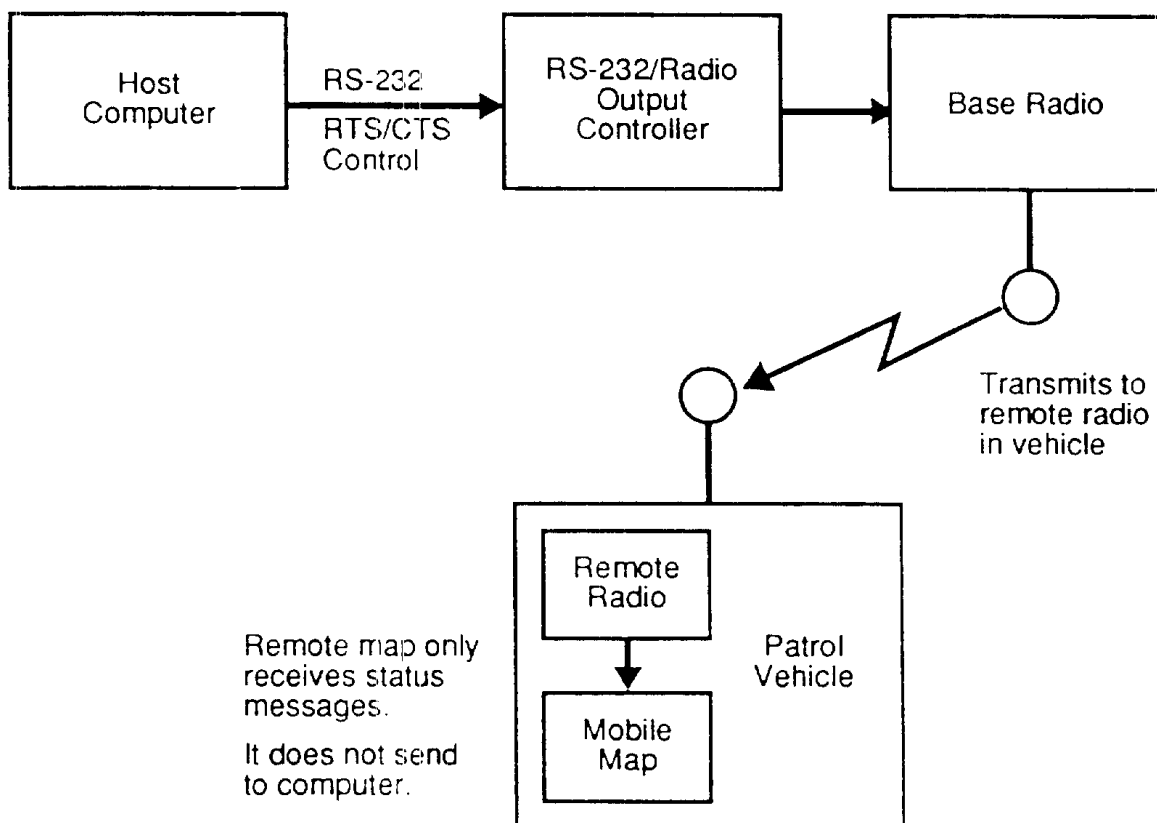
---

**Note:** The computer should never be opened by anyone other than a trained technician.

---

### 3.14 Mobile Map Installation

The computer communicates with mobile maps (Model MD-32) using an RS-232 interface (See Figure 3-11). The RS-232 port is connected to an RS-232/radio interface card via the cable assembly. The interface card converts the computer transmissions into audio and PTT keying signals recognized by a base radio.



**Figure 3-11. Mobile Map Interface Diagram**



The base radio may be supplied by Stellar or the customer, and the radio instruction manual should be read. The base radio transmits status messages from the computer to the radio receiver in a remote vehicle(s). When the vehicle radio receives a computer-generated message it updates the remote map mounted in the vehicle.

The mobile map contains a map controller and an LED driver. The mobile map only receives messages, it does not send messages to the computer. The RS-232 protocol uses RTS and CTS signals to tell the interface controller that the radio is or is not in use for voice transmission.

Any number of mobile maps (Model MD-32) can be used with the Miniplex IIIA system. A bracket is supplied with the mobile map so that it can be mounted at a convenient viewing angle in a response vehicle. The map is illuminated for low-light environments, and a light-level control is provided on the front panel.

Refer to Section 4 to program the computer for, a site using mobile maps.

### 3.15 Relay Interface Installation

The Miniplex IIIA can be used by customers wishing to control such things as their closed circuit television (CCTV) installations. The interface is triggered by relays that are supervised by a relay interface. The map controller receives instructions from the Miniplex IIIA computer via the RS-422 map bus. The RS-422 cable connects the computer and a relay interface controller assembly. See Figure 1-9.

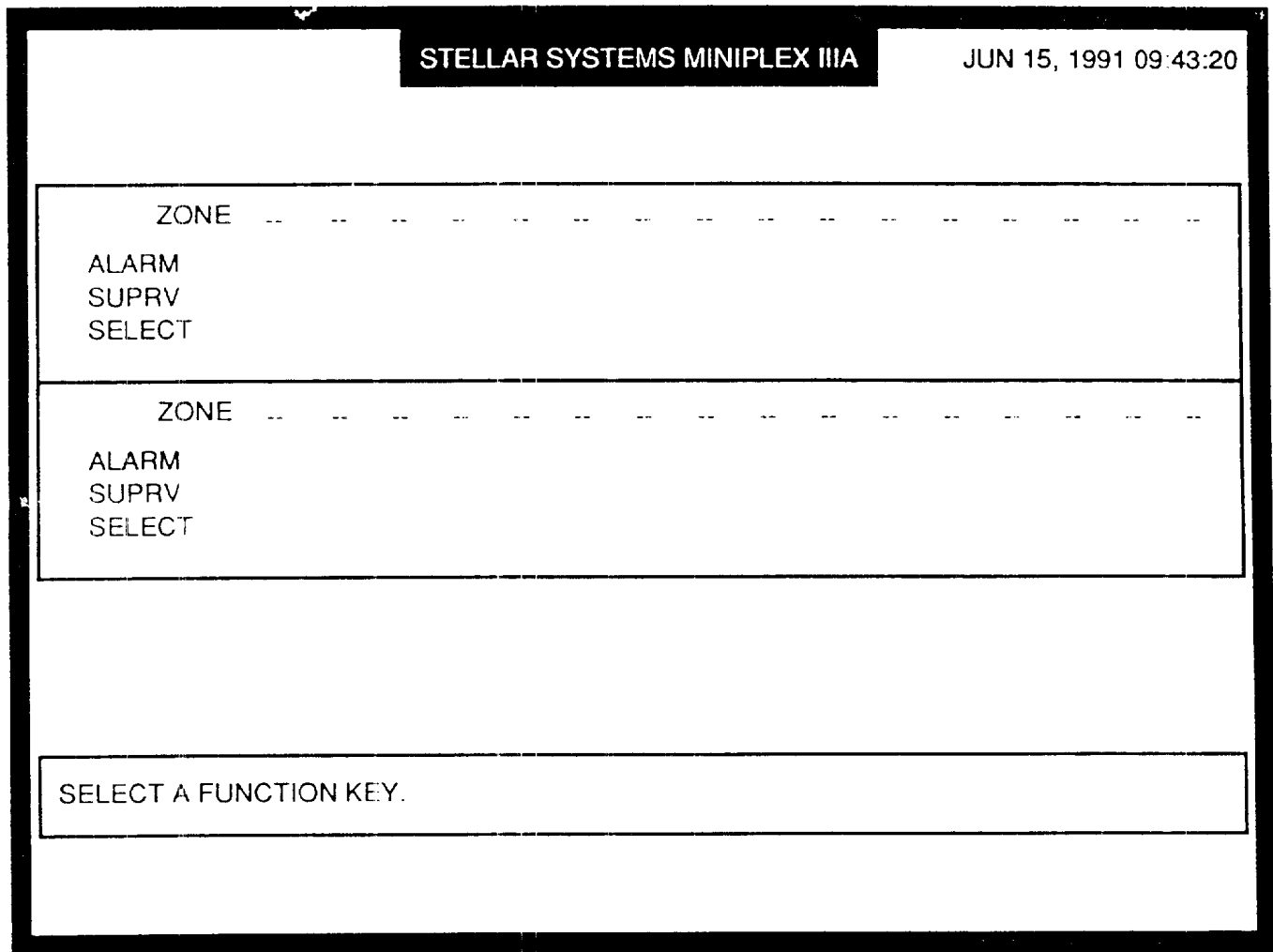
Each relay in the relay interface controller is connected to a separate input on the CCTV switcher alarm interface. The switcher controls which CCTV camera is turned on or off in response to signals from the computer.

Refer to Section 4 to program the computer for Miniplex IIIA to CCTV interface.

A DIP switch on the map controller is set to indicate that the map will be used as a relay interface.

### 3.16 Verifying the Installation

1. Check all connections again to make sure they are correct and that the connectors are tightened down properly.
2. Check the installation against the site diagram to make sure an of the components have been installed.
3. Turn on the computer. The computer performs a self-test, after which the Operator's screen will be displayed on the monitor, as shown in Figure 3-12.



**Figure 3-12. Power Up Operator's Screen**

The operator screen may not contain any site specific data at this time. See Section 4 on configuring the computer to reflect the site diagram and pre-planned security requirements.

The last step of the installation is to record the computer serial number and customer selected password.



# *Section 4*

## *Site Configuration*

---

### **4.1 Section Contents**

This section contains a detailed explanation on how to configure the Miniplex IIIA system for your site. The following topics are covered:

- Security Manager Procedures
- Configuring the System
- Configuring Maps
- Entering the Site Password
- Configuring Alarm Zones
- Set Password For Changing Secure To Access
- Setting the Clock/Calendar
- Setting Printer Status

### 4.2 Security- Manager Procedures

The security manager is able to power up, configure, and monitor the system. Operators are usually restricted to just monitoring the system. The flowchart below (Figure 4-1) shows the tasks the security manager must perform to configure the system, and the sequence in which screens are accessed.

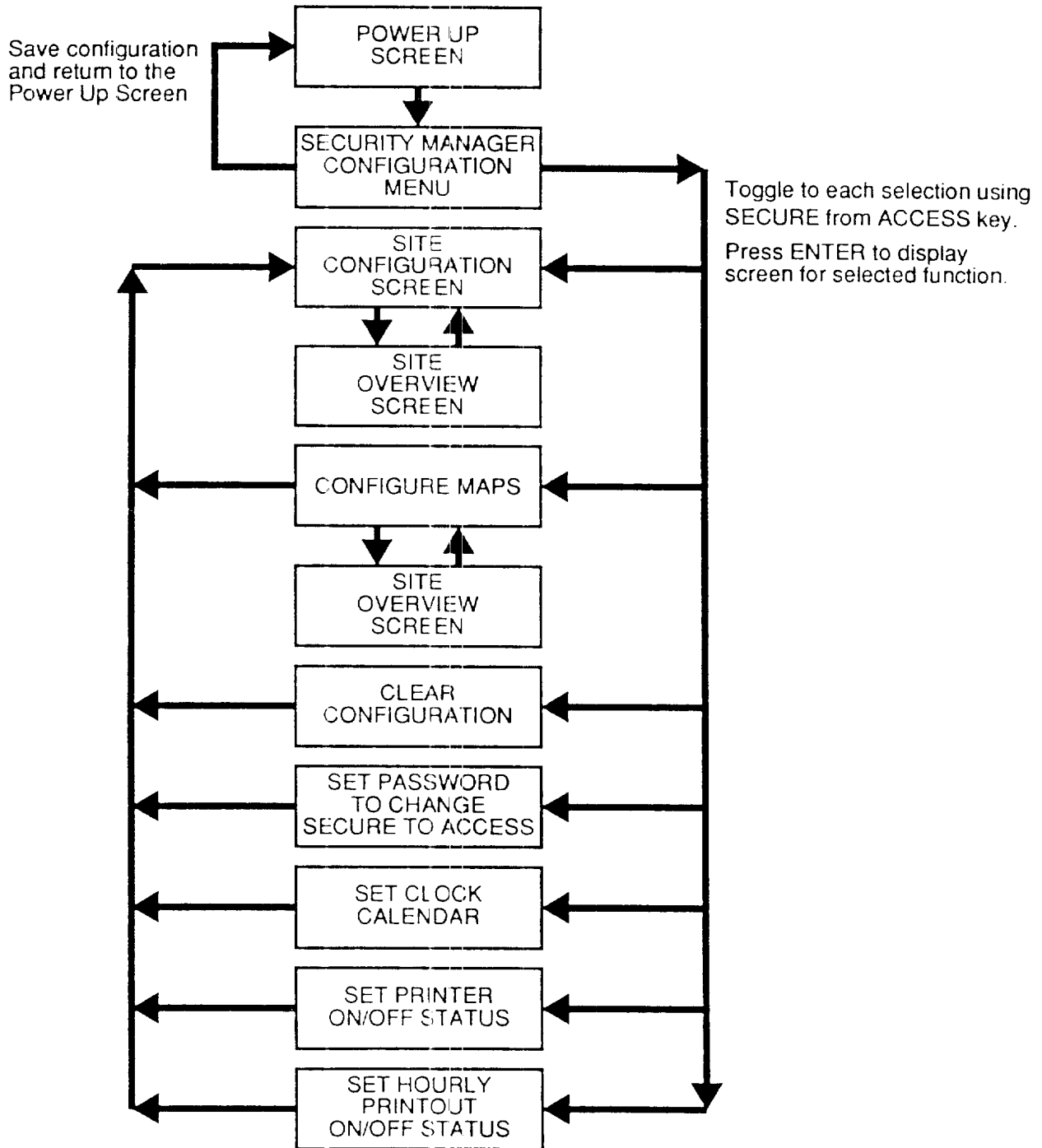


Figure 4-1. Security Manager Screens

## 4.3 Configuring the System

### 4.3.1 Operator's Screen

After the security manager has completed installation planning (defined in Section 2), and computer is installed (detailed in Section 3) and powered up, the Operator's Screen, shown in Figure 4-2, is displayed.

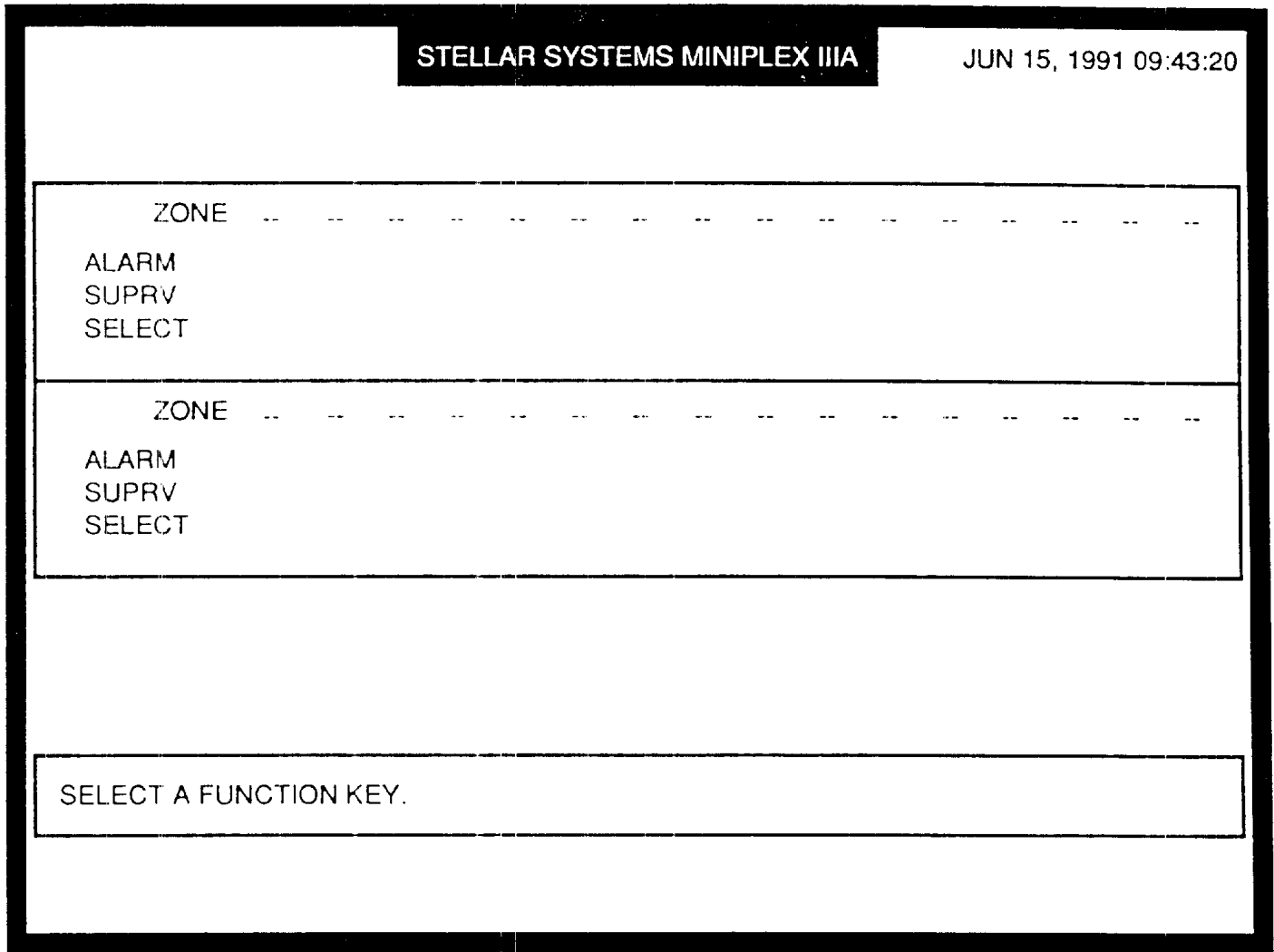


Figure 4-2. Operator's Screen

---

**Note:** If the above operator's screen is not displayed when the computer is turned on, or the computer diagnostics are displayed, turn the computer off and on again. If the second attempt is not successful, please contact Stellar System's field service department.

---

### 4.3.2 Entering the Site Password

When a site is first installed the operator screen will not contain any information about the site. The site security manager must enter the site password to access the configuration menus and enter all site information. The default password set at the factory is 4300. To change the password to a different setting, see *Section 3.5. 1, Setting the Site Password*.

To enter the current site password:

1. Press the **SECURE FROM ALARM** key on the keypad.
2. Type **85** and press **ENTER**. The password prompt is displayed at the bottom of the power up operator's screen (Figure 4-3).

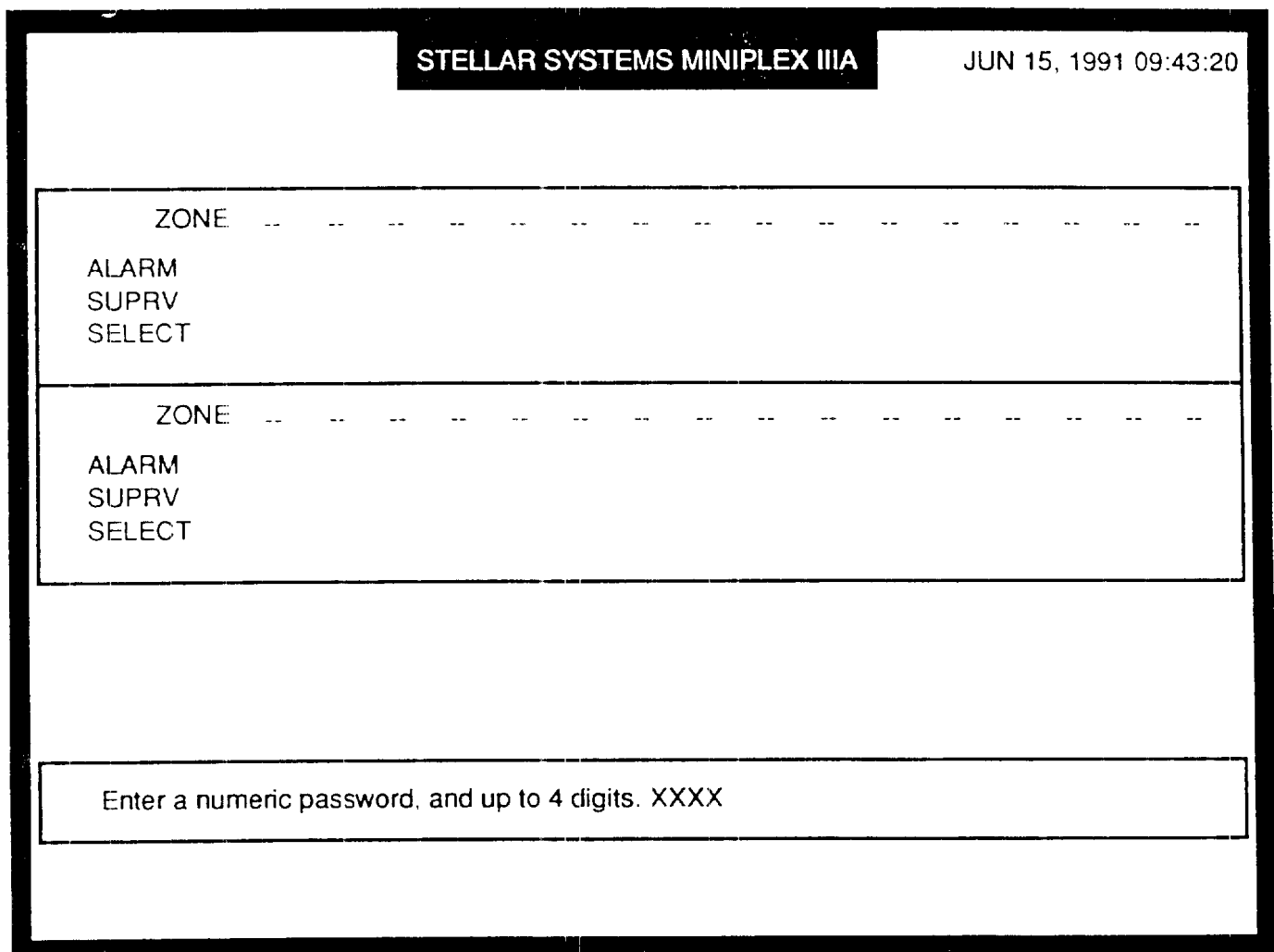


Figure 4-3. Operator's Screen with Password Prompt

3. Type the 4-digit password (4300 or whatever password you selected via the DIP switches on the Trunk card; see Section 3.4.1) and press ENTER.

The Miniplex IIIA configuration main menu will be displayed and the computer can now be configured to reflect your site.



### 4.3.3 Miniplex 111A Configuration Menu

After the site password is entered correctly, the MINIPLEX IIIA CONFIGURATION menu will be displayed (Figure 4-4). This menu contains the selections for configuring your site.

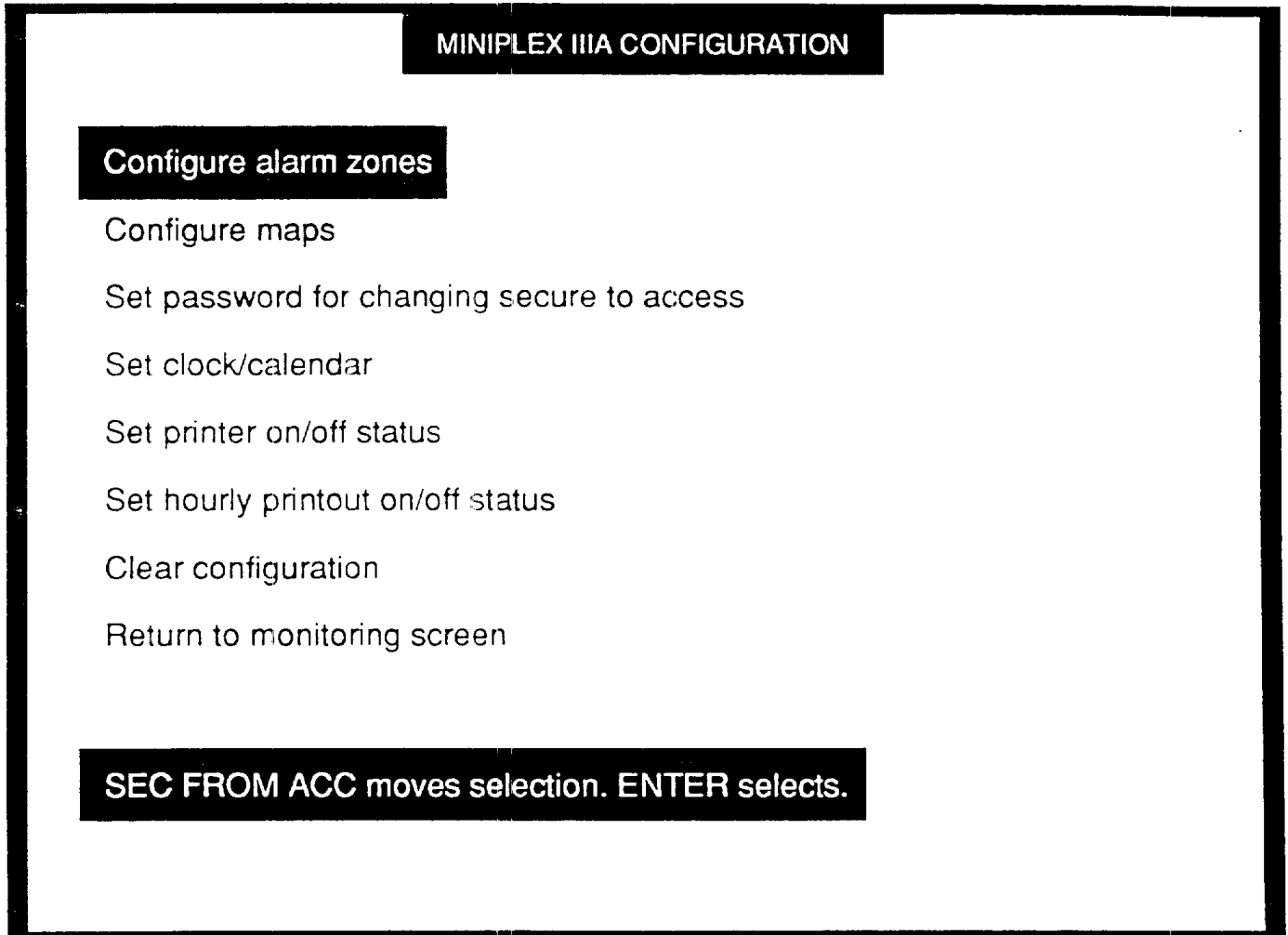


Figure 4-4. Miniplex IIIA Configuration Menu

---

**Note:** The portion of the message in capital letters at the bottom of the screen refers to the keypad function keys.

---

### 4.3.4 Configuring Alarm Zones

To configure the alarm zones, select Configure alarm zones from the menu and press **ENTER**. The **SITE CONFIGURATION** screen (Figure 4-5) will be displayed. There are a total of 32 transponders, numbered from 0 to 31, available in the system.

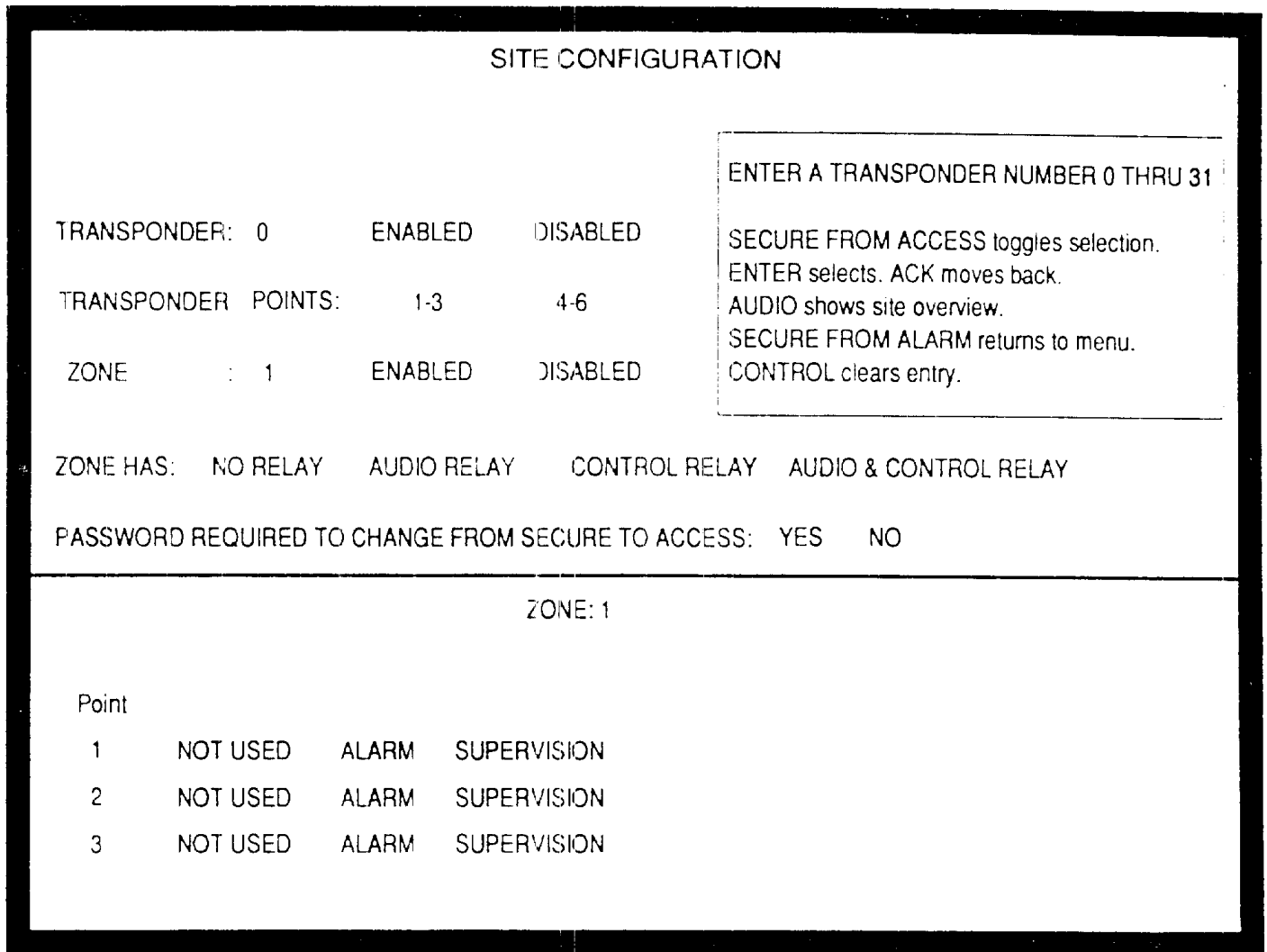


Figure 4-5. Site Configuration Screen

**Note:** The keypad functions used to enter site configuration data are defined in the box on the right top of the screen.

The site configuration information is entered as shown in the following example:

1. For **TRANSPONDER:**, type **16** and press **ENTER**.
2. Use the **SECURE FROM ACCESS** key to select **ENABLED** or **DISABLED** and press **ENTER**.
3. If **ENABLED** is selected, the program will move to **TRANSPONDER POINTS:**. Use the **SECURE FROM ACCESS** key to select 1-3 or 4-6 (see Figure 3-7) and press **ENTER**.
4. Type the desired zone number in the field following **ZONE:** and press **ENTER**.
5. Select **ENABLED** or **DISABLED** for the zone being configured and press **ENTER**.
6. Select the zone attributes (**NO RELAY**, **AUDIO RELAY**, **CONTROL RELAY**, **AUDIO & CONTROL RELAY**), and press **ENTER**.
7. Select **YES** or **NO** if a password will/will not be required to change the zone from **SECURE** to **ACCESS** and press **ENTER**.

Perform steps 1 through 7 for each transponder/zone configured in the site.

When you have finished, the information in the lower part of the screen will reflect the selections entered.

### 4.3.5 Site Overview

The configuration procedure is performed for each transponder/zone at the site. By accessing the Site Overview screen (Figure 4-6), you can review the transponder/zone configuration.

1. Press **AUDIO** to display page 1 of the **SITE OVERVIEW** screen. Page 1 contains the status of transponders 0 through 11. Press **CONTROL** to print a copy of the screen.
2. Press **ENTER** to move to page 2 of the **SITE OVERVIEW** screen. Page 2 contains the status of transponders 12 through 21. Press **CONTROL** to print a copy of the screen.
3. Press **ENTER** to move to page 3 of the **SITE OVERVIEW** screen. Page 3 contains the status of transponders 22 through 31. Press **CONTROL** to print a copy of the screen.

SITE OVERVIEW (Page 1)			
TRANSPONSER 0 OFF P1 Z64 AL AUD&CTL P2 Z64 SU AUD&CTL	TRANSPONSER 1 ON P1 Z1 AL AUD&CTL P2 Z1 SU AUD&CTL  P4 Z2 AL AUD&CTL P5 Z2 SU AUD&CTL	TRANSPONSER 2 ON P1 Z13 AL AUD&CTL P2 Z13 SU AUD&CTL  P4 Z15 AL AUD&CTL P5 Z15 SU AUD&CTL	TRANSPONSER 3 OFF P1 Z7 AL AUD&CTL P2 Z7 SU AUD&CTL  P4 Z8 AL AUD&CTL P5 Z8 SU AUD&CTL
TRANSPONSER 4 OFF	TRANSPONSER 5 OFF P1 Z11 AL AUD&CTL P2 Z11 SU AUD&CTL  P4 Z12 AL AUD&CTL P5 Z12 SU AUD&CTL	TRANSPONSER 6 OFF  P4 Z14 AL AUD&CTL P5 Z14 SU AUD&CTL	TRANSPONSER 7 OFF  P4 Z16 AL AUD&CTL P5 Z16 SU AUD&CTL
TRANSPONSER 8 OFF P1 Z17 AL AUD&CTL P2 Z17 SU AUD&CTL  P4 Z18 AL AUD&CTL P5 Z18 SU AUD&CTL	TRANSPONSER 9 OFF P1 Z19 AL AUD&CTL P2 Z19 SU AUD&CTL  P4 Z20 AL AUD&CTL P5 Z20 SU AUD&CTL	TRANSPONSER 10 OFF P1 Z21 AL AUD&CTL P2 Z21 SU AUD&CTL  P4 Z22 AL AUD&CTL P5 Z22 SU AUD&CTL P6 Z22 SU AUD&CTL	TRANSPONSER 11 OFF

Press: ENTER for next page, CONTROL to print screen, ANY OTHER KEY to exit

Figure 4-6. Site Overview Screen

4. Check the attributes configured for each transponder against the site configuration diagram. Press any other key to EXIT. The program will return to the **SITE CONFIGURATION** screen. Configuration can continue, or changes can be made.
5. Press **SECURE FROM ALARM** to return to the main configuration menu.

**Note:** A zone can be configured with 2 or 3 points as alarms, or 2 or 3 points as supervision (tamper) alarms. Both types will cause an alarm on the operator's screen. All points of the type must be restored before \* is displayed.

Separate points will print separately as 1, 2, etc. Therefore, box tampers and sensors will print separately while annunciating at one screen location.

### 4.3.6 Configuring Maps

1. From the Configuration Menu select **Configure Maps** and press **ENTER**. The **MAP CONFIGURATION** menu will be displayed (Figure 4-7).

**MAP CONFIGURATION**

CONTROLLER ADDRESS 2

CONTROLLER TYPE: DISABLED **LOCAL MAP** MOBILE MAP RELAY OUTPUT

---

ZONE NUMBER: 1                      ADD ZONE      DELETE ZONE

**Enter a Controller Address 0 thru 15:**

SECURE FROM ACCESS toggles selection.                      ENTER selects.  
 SECURE FROM ALARM returns to menu.                      ACK moves back.  
 CONTROL clear entry.                      AUDIO shows site overview.

**Figure 4-7. Map Configuration Screen**

2. The first field on this screen is **CONTROLLER ADDRESS:**. A highlighted prompt on the lower half of the screen reads:

Enter a Controller Address 0 thru 15: 3

3. Type a controller address. (In this example 3) The highlighted prompt now reads:

Select controller Type

4. Use the **SECURE FROM ACCESS** key to select the type of controller (**DISABLED**, **LOCAL MAP**, or **MOBILE MAP**), and press **ENTER**.
5. The prompt again requests that a controller address be entered. Repeat this process until all site controllers/maps are configured. Up to 16 maps can be supported by the Miniplex IIIA.

6. You can move around the screen to change or delete entries. As soon as configuration is complete press **AUDIO** to display the site overview screen. A copy of this screen can be printed so the controller configuration can be checked against the site diagram. If all attributes are correct press **ENTER** to select.
7. Press **SECURE FROM ALARM** to return to the main menu.
8. Select Return to monitoring screen, and press **ENTER**. The operator screen now displays the specific site attributes that have been programmed.

### 4.3.7 Configuring Relay Outputs

If you select RELAY OUTPUT (which is the type of controller for CCTV) as the controller type, then a new screen will be displayed (Figure 4-8). The screen will contain the relay number, activation type, and a listing of all the zones associated with a transponder. Initially you will not have any zones highlighted because no zone will be associated with a relay.

**MAP CONFIGURATION**

CONTROLLER ADDRESS: 2

CONTROLLER TYPE: DISABLED   LOCAL MAP   MOBILE MAP   **RELAY OUTPUT**

---

RELAY NUMBER: 1

ACTIVATION: NONE COMM-ERR ALARM ACCESS SECURE SUPRV AUDIO CONTROL AUDIO-SPV

HIGHLIGHTED ZONES ARE CURRENTLY ASSOCIATED WITH RELAY/ACTIVATION STATUS:

1   2   13   15

ZONE NUMBER: 1                      ADD ZONE      DELETE ZONE

**Enter a Relay Number 0 thru 255**

SECURE FROM ACCESS toggles selection.	ENTER selects.
SECURE FROM ALARM returns to menu.	ACK moves back.
CONTROL clear entry	AUDIO shows site overview.

Figure 4-8. Configuring Relay Outputs

Activation status choice means that a specific relay is associated with a status, such as alarm. When that status occurs on any selected (highlighted) zone, the relay at the controller activates. All status must clear on all associated zones before the relay deactivates. ("Any" closes the relay and "all clears" opens the relay.) As long as the selected status of the alarm, comm-error, supervision alarm, or audio supervision is highlighted, the associated controller relays are activated.

The relay associated with access, secure audio, or control will follow the screen activity. For example, turning on a control relay on zone 3 will activate a relay on a transponder and it would activate an associated relay at a remote relay controller.

To associate a zone with an activation status and turn on a relay with that activity, enter the following commands:

1. Enter a relay number.
2. Use the **SECURE FROM ACCESS** key to select an Activation Status and press **ENTER**.
3. Enter a zone number.
4. Use the **SECURE FROM ACCESS** key to select ADD ZONE or DELETE ZONE and press **ENTER**.

**ADD ZONE** - you may choose to associate any number of zones displayed with a particular relay and Activation Status by continuing to enter zones and pressing **ENTER** with **ADD ZONE** highlighted.

**DELETE ZONE** - you may disassociate any number of the highlighted zones with a relay and Activation Status by entering the number of the zone and pressing **ENTER** with **DELETE ZONE** highlighted. Note that the zone will no longer be highlighted.

5. If the zone already has relays associated with it, the system will beep and then the associated relays will be displayed one-by-one as you press any key for the next associated relay number and controller number.

When there are no more relays associated with that particular zone and Activation Status, the message "ADD THE NEW DEFINITION PRESS ACK" will be displayed. When you press **ACK**, this relay will also be associated with this zone and Activation Status. If any other key is pressed, this relay will not be associated with the zone and Activation Status.

6. Press **ACK** when you have satisfactorily defined the relay and you will be ready to enter the next relay number.

7. If you would like to know which relays are associated with what Activation Status and zone, press the **SECURE FROM ACCESS** key to display the next relay greater than the relay number currently displayed that is associated with an Activation Status and zone(s). If no relays are defined above the current number, the message "All relays have been displayed!" will appear.
8. To leave the relay configuration, press **ACK** where you enter the relay number. You will move to the controller entry position. From there you may press the **SECURE FROM ALARM** key to return to the main menu, or select another controller address to configure another interface.



### 4.3.8 Set Password for Changing Secure to Access

In the MINIPLEX IIIA CONFIGURATION menu:

1. Press **SECURE FROM ACCESS** to select SET PASSWORD FOR CHANGING SECURE TO ACCESS and press **ENTER**. See Figure 4-9.

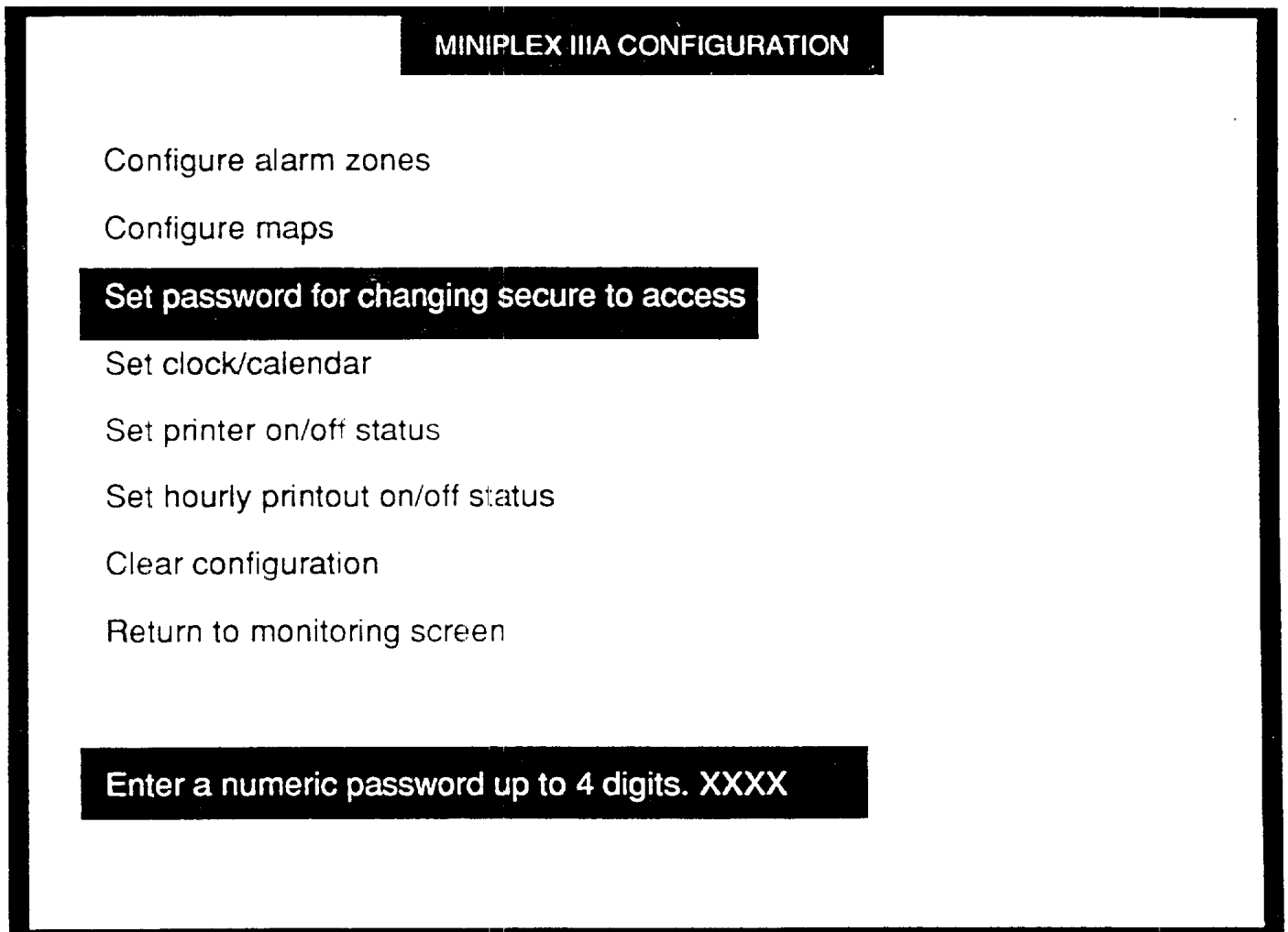


Figure 4-9. Set Password for Changing Secure to Access Menu Selection

2. The operator prompt at the bottom of the screen will now request you to enter a password.
3. Type the 4-digit password and press **ENTER**.

This 4-digit password must be entered by the operator each time a change from SECURE to ACCESS is selected (configured) for that zone as "P" on overview. For security reasons this password does not appear on the screen when typed.

For example, if a vehicle wants to enter the site through a secured gate, the operator enters the 4-digit password, the grate status will change from SECURE to ACCESS to allow the vehicle to enter without annunciating an intrusion alarm.

### 4.3.9 Setting the Clock/Calendar

The procedure given below sets the real-time 24-hour clock/calendar for the Miniplex IIIA system. The information is displayed on the right top of the operator's monitoring screen. The clock contains two lithium batteries, and will maintain time in excess of ten years in the absence of power. The date at the end of each month is automatically adjusted for months with less than 31 days, including corrections for leap years.

1. Press **SECURE FROM ACCESS** to select Set Clock/Calendar, then press **ENTER**. See Figure 4-10.

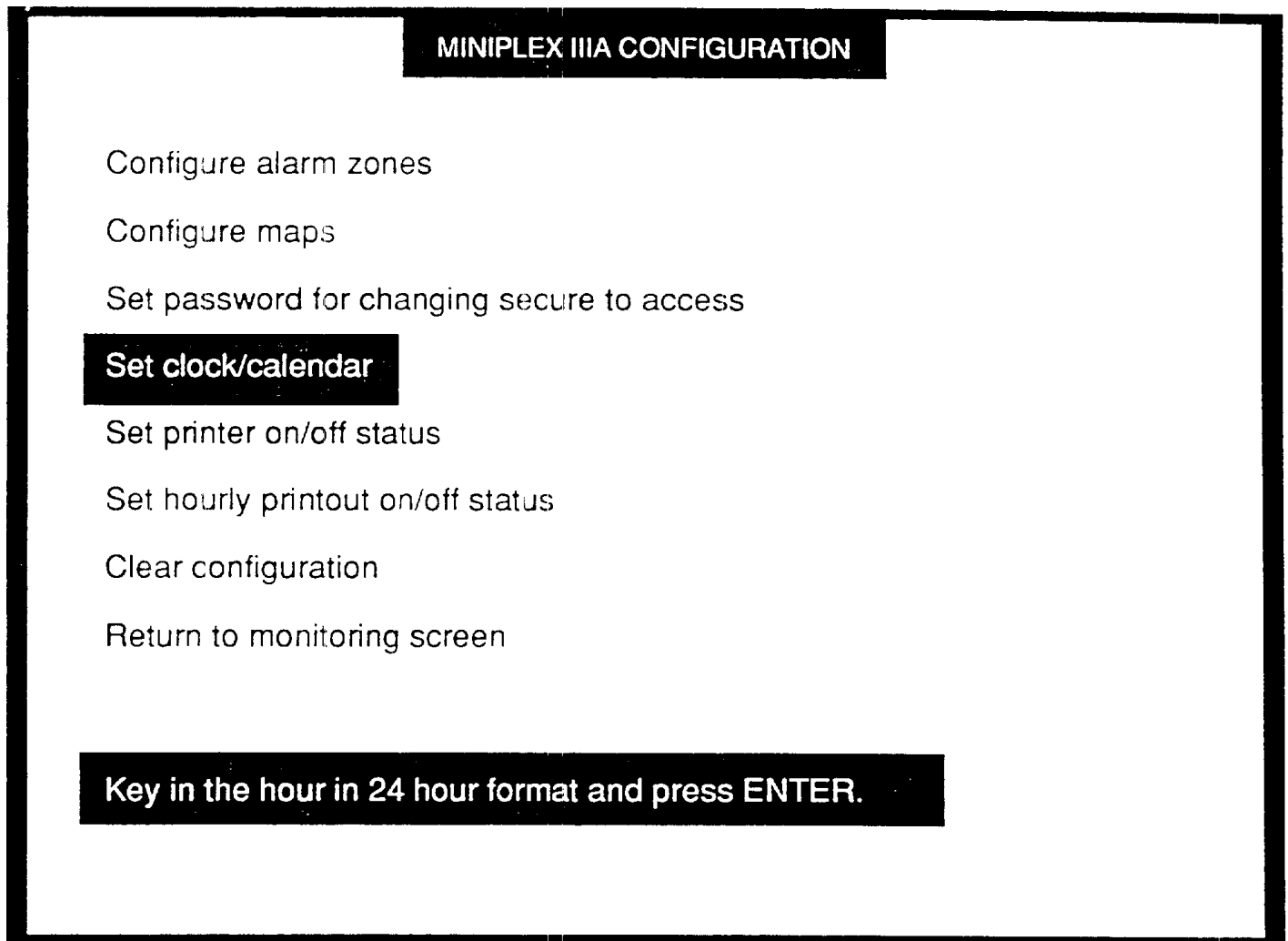


Figure 4-10. Setting the Clock/Calendar Menu Selection

2. The operator prompt at the bottom of the screen requests the hour. Type the hour based on local mean time:

Key in the hour in 24 hour format and press ENTER. 15:

3. The operator prompts at the bottom of the screen will continue to request:

Key in the minutes then press ENTER. 15:22

Key in the seconds then press ENTER. 15:22:36

Key in the month (1-12) then press ENTER. 15:22:36 1/

Key in the day (1-31) then press ENTER. 15:22:36 1/25/

Key in the year (ex: 1999) then press ENTER. 15:22:36 1/25/1991

The date and time will be included on all printer output, and is displayed on the top right of the operator screen in the following format:

JAN 25, 1991 15:22:36

### 4.3.10 Printer On/Off Status

1. Select Set printer on/off status, and press **ENTER**. See Figure 4-11.

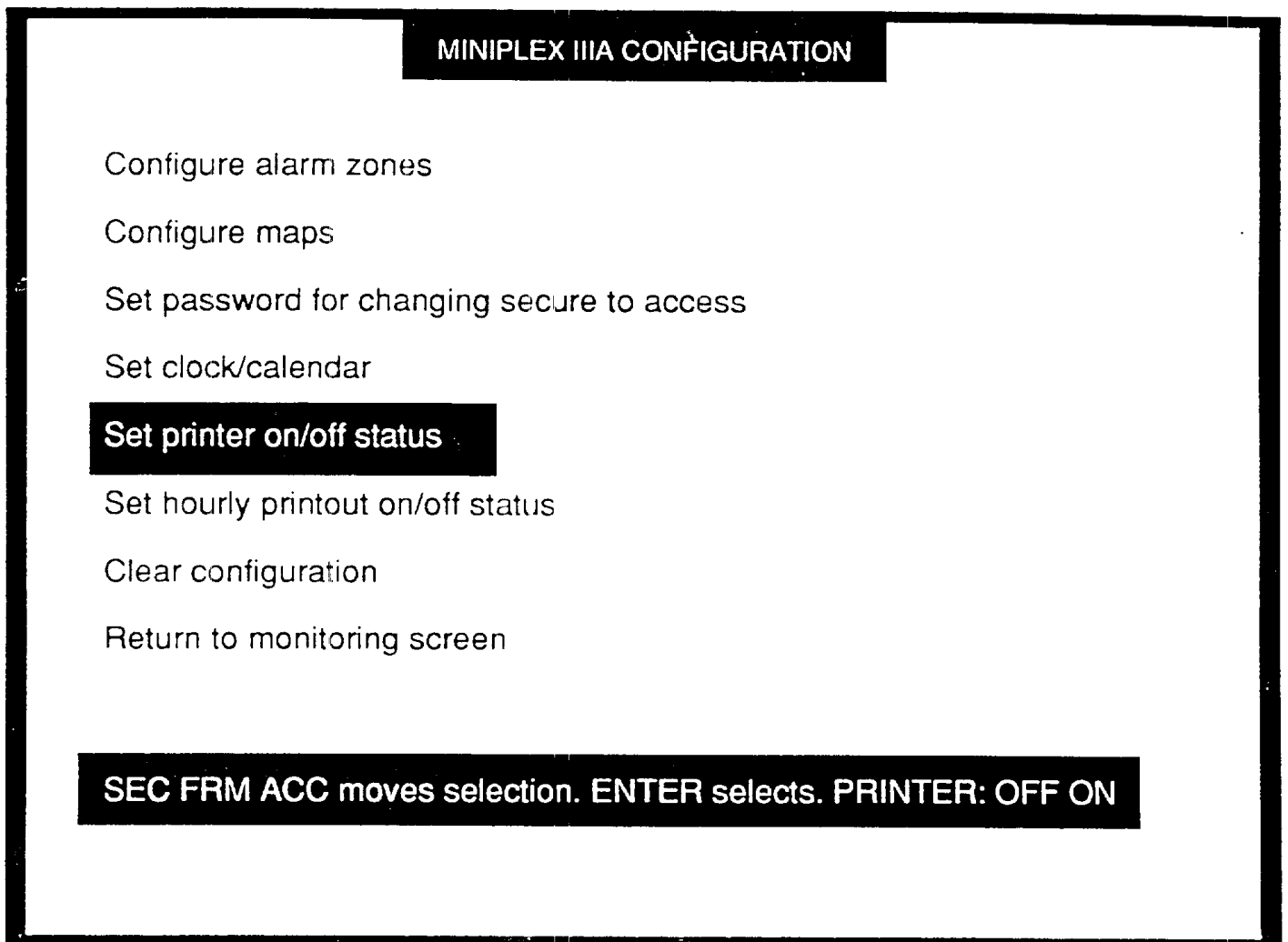


Figure 4-11. Printer On/Off Status Menu Selection

2. At the prompt, use the **SECURE FROM ACCESS** key to select ON or OFF, and press **ENTER**. The printer is now activated or deactivated. The configuration menu is again displayed on the monitor.

### 4.3.11 Hourly Printout Status

1. Select Set hourly printout on/off status, and press **ENTER**. The prompt message reads as shown in Figure 4-12.

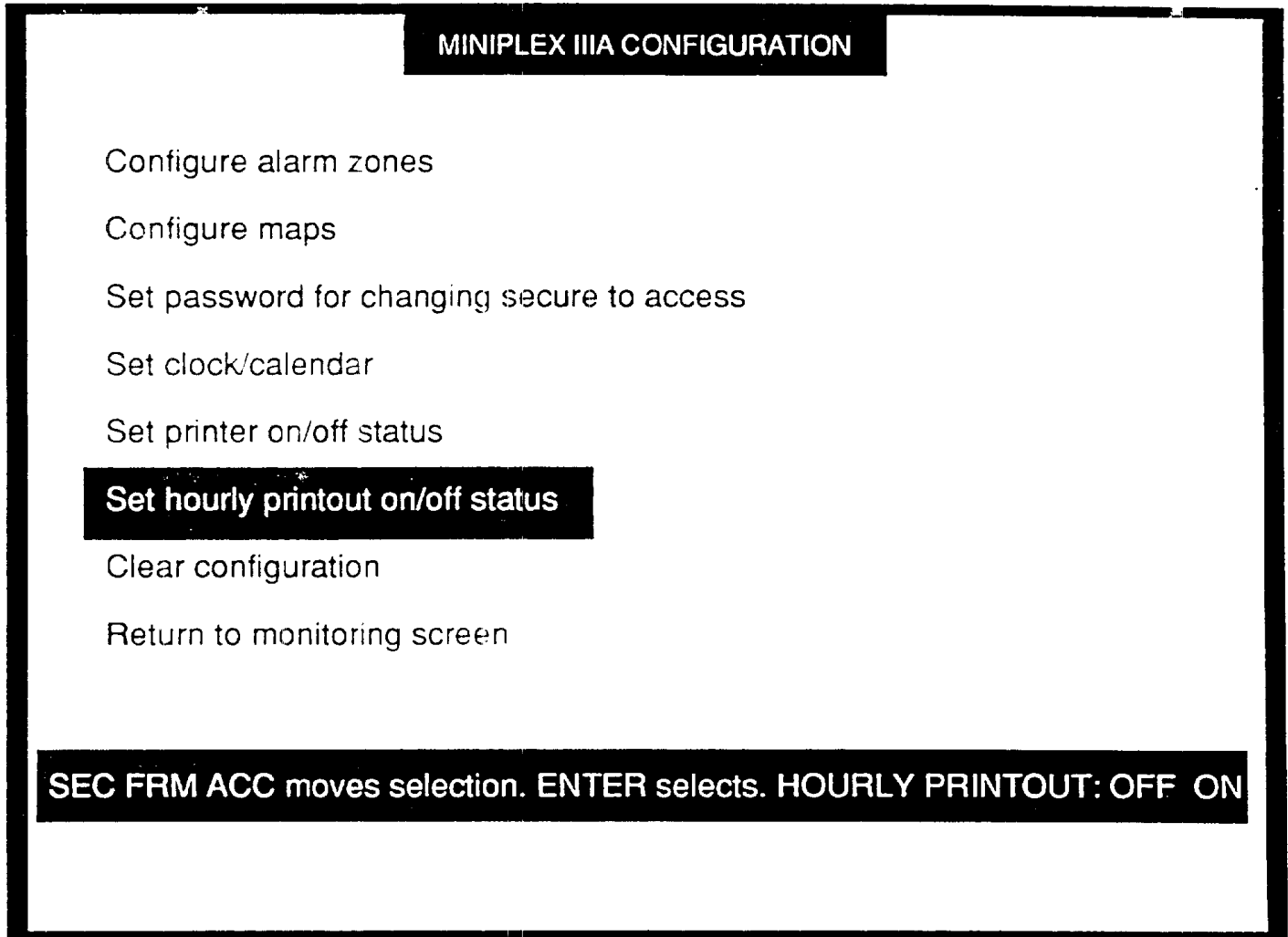


Figure 4-12. Set Hourly Printout Status Menu Selection

2. At the prompt, use **SECURE FROM ACCESS** key to select OFF or ON, and press **ENTER**.

The computer will now generate a site status report which will be printed every hour, even if no site activity has taken place.

### 4.3.12 Non-configurable Numbers

#### 4.3.12.1 Power Up Number

The clock/calendar generates a sequential POWER UP number that cannot be changed (unless it is reset at the factory), continues to increase, and is recorded in non-volatile RAM. The power up number is displayed on the top left of the screen for about 3 seconds each time the computer is turned on. Each time a power up number is generated it is printed by the printer as an event. It is not possible to turn on the computer without having the event stored with the associated date and time. Even if the printer is not in operation when an event occurs the events are still being recorded in the computer in non-volatile memory, and will print as soon as the printer is operating. Refer to Figure 4-13.

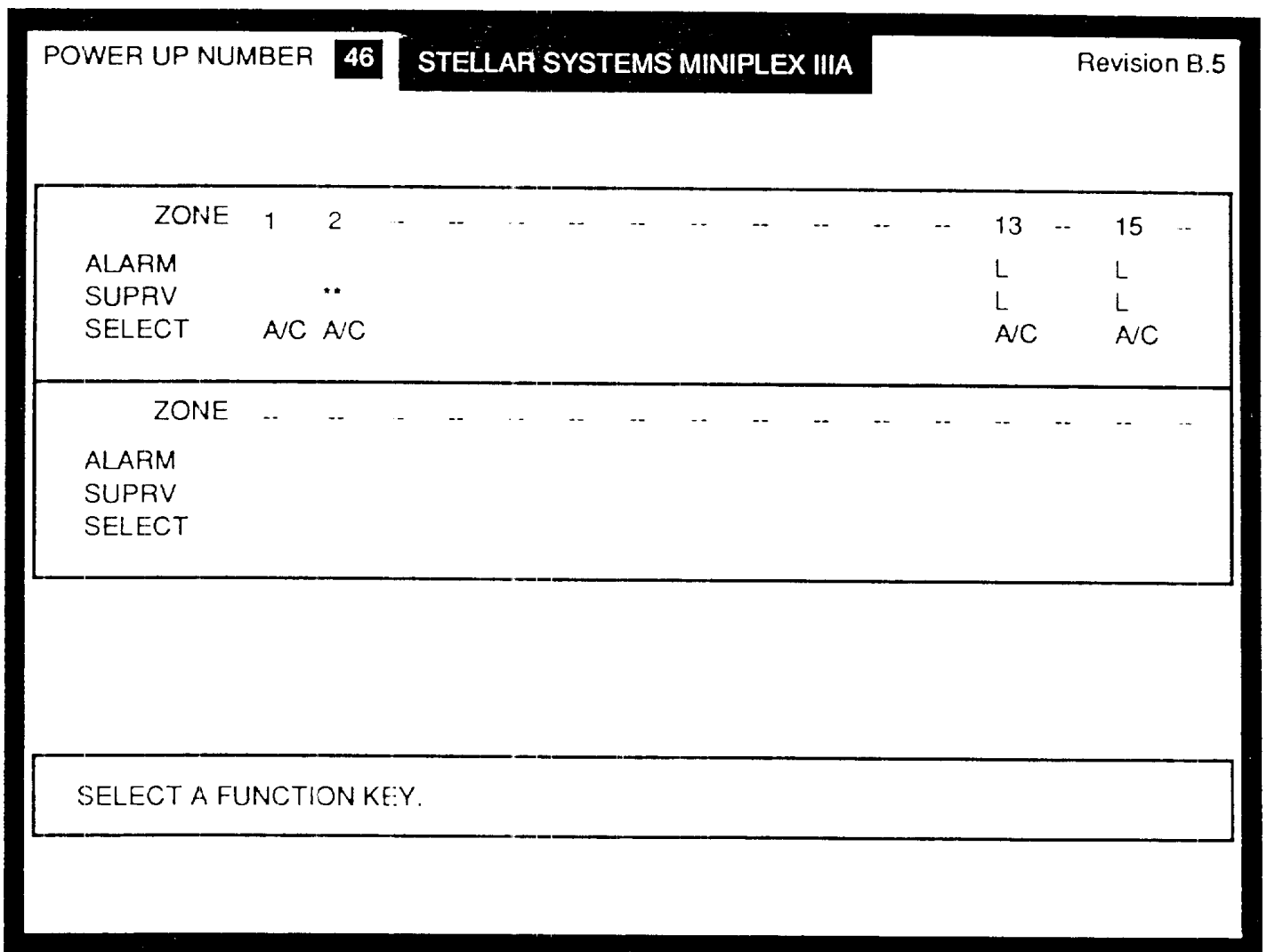


Figure 4-13. Power Up Screen

### 4.3.12.2 Revision Number

When the computer is turned on a revision number is displayed for about 3 seconds on the top right of the screen. This is the revision level number of the Miniplex IIIA software program installed in the computer. If there are any problems with the program, Customer Service will need to know the software revision number. Refer to Figure 4-13.

### 4.3.12.3 Event Number

The clock/calendar generates an event number. This event number is not displayed on the computer screen, but is printed each time an event occurs. Each time the computer is turned off and re-powered the event numbers will start at number 1. See Figure 4-14.

```
(35) JUN 15, 1991 11:42:23
** Intrusion Alarm, Zone 2

(36) JUN 15, 1991 11:42:23
** Intrusion Alarm, Zone 2 Transponder 1 Point 4

(37) JUN 15, 1991 11:42:24
** Intrusion Alarm Restored, Zone 2 Transponder 1 Point 4

(38) JUN 15, 1991 11:42:23
Operator Acknowledge

(1) JUN 15, 1991 14:22:05
POWER UP NUMBER 122

(2) JUN 15, 1991 14:22:05
*** Supervision - Bad Audio Line. Transponder 1

(3) JUN 15, 1991 14:22:16
*** Supervision - Audio Line Restored. Transponder 1

(4) JUN 15, 1991 14:22:05
*** Supervision - Bad Audio Line. Transponder 1

(5) JUN 15, 1991 14:25:08
Operator Acknowledge

(5) JUN 15, 1991 14:25:10
Operator Acknowledge

(1) JUN 15, 1991 14:30:45
POWER UP NUMBER 123

(2) JUN 15, 1991 14:30:50
OPERATOR ENTERED CONFIGURATION MENU

(3) JUN 15, 1991 14:31:10
OPERATOR EXITED CONFIGURATION MENU

(1) JUN 15, 1991 14:35:35
POWER UP NUMBER 124
```

Figure 4-14. Printer Output of Events





### **5.1 Section Contents**

This section contains a detailed explanation of the operation of the Miniplex IIIA system. The following topics are covered:

- Operator's Screen
- Screen Symbols
- Fields
- Prompts
- Messages
- Keypad Functions
- System Monitoring

## 5.2 Operator's Screen

After the security manager has programmed the site configuration information in the computer, the Miniplex IIIA operator screen will reflect the site attributes. Figure 5-1 shows a configured operator screen.

STELLAR SYSTEMS MINIPLEX IIIA											JUN 15, 1991 09:43:20			
ZONE	1	2	--	--	--	--	--	--	--	--	13	--	15	--
ALARM											L		L	
SUPRV		**									L		L	
SELECT	A/C	A/C									A/C		A/C	
ZONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ALARM														
SUPRV														
SELECT														
SELECT A FUNCTION KEY.														

Figure 5-1. Operator Screen with Site Configured

### 5.2.1 Screen Symbols

As site events occur they are represented by the following symbols:

<b>Symbol</b>	<b>Meaning</b>
** (flashing)	Unacknowledged alarm or supervision
** or * (steady)	Acknowledged alarm or supervision
L (flashing)	Unacknowledged communications failure
L (steady)	Acknowledged communications failure
TEXT (flashing)	Unacknowledged failure message
TEXT (steady)	Acknowledged failure message
ACC (steady)	Access
Green Block (steady)	Secure
A/C (reverse)	Audio/Control ON
A/C (halftone)	Audio/Control OFF

## 5.2.2 Screen Fields

The fields of information displayed on the computer screen are defined as:

<b>Field</b>	<b>Description</b>
Power up number	The power up number in the top left of the screen is displayed for approximately three (3) seconds each time the computer is powered up. The number can never be reset, thus preventing undetected computer operation.
Volume	The volume field is displayed in top left of the screen. The bars (following the word volume) indicate the volume level of the selected audio signal.
Product Name	The name of the product is displayed at the center top of the screen.
REV number	The revision number of the software installed in the computer is displayed in the top right of the screen for approximately three (3) seconds each time the computer is powered up.
Date/Time	The month, day, and year are displayed in the top right of the screen; followed by current local time the following format: (hour: minute: second)
ZONE(s)	The configured zone numbers are displayed in two boxed fields across the center of the screen. Zones 1 through 16 are displayed in the top field. Zones 17 through 32 are displayed in the lower field. Four boxes are displayed if zones 33 through 64 are defined.
ALARM	The alarm field displays status information under the associated zone.
SUPRV	The supervision field displays status information under the associated zone.
SELECT	The select field displays status information under the associated zone.
Operator Prompt	The operator prompt box is located across the lower part of the screen. Operator prompts are defined in Section 5.2.3.
Failure Messages	Failure messages are displayed under the operator prompt box. Failure messages are defined in Section 5.2.4.

### 5.2.3 Operator Prompts

<b>Prompt:</b>	SELECT A FUNCTION KEY
<b>Response:</b>	Press any function key. This message indicates that the system is ready for any new action the operator wishes to perform.
<b>Prompt:</b>	ENTER ZONE NUMBER AND PRESS ENTER
<b>Response:</b>	To change the status of a specific zone, type the zone number and then press <b>ENTER</b> .
<b>Prompt:</b>	ENTER 4-DIGIT AUTHORIZATION CODE AND PRESS ENTER
<b>Response:</b>	If the security manager has granted the operator the security level to perform this task, the operator can enter the 4-digit password and then press <b>ENTER</b> . This password will allow the operator to change the configured point from SECURE to ACCESS.
<b>Prompt:</b>	PRESS ACK TO SILENCE BEEPER AND ACKNOWLEDGE ALARMS
<b>Response:</b>	An intrusion alarm or supervision alarm will generate two blinking asterisks (**) that will be displayed on the screen. Press <b>ACK</b> to silence the beeper and, if the alarm condition no longer exists (the point is restored), a single steady asterisk * will be displayed. If an alarm condition still exists, two steady asterisks ** will be displayed until the condition that triggered the alarm is corrected.
<b>Prompt:</b>	PRESS ACK TO SILENCE BEEPER AND ACKNOWLEDGE IMPROPER STATUS
<b>Response:</b>	If the computer fails to receive the expected status after polling the transponders two times, an L will be displayed under the associated zone number on the screen.

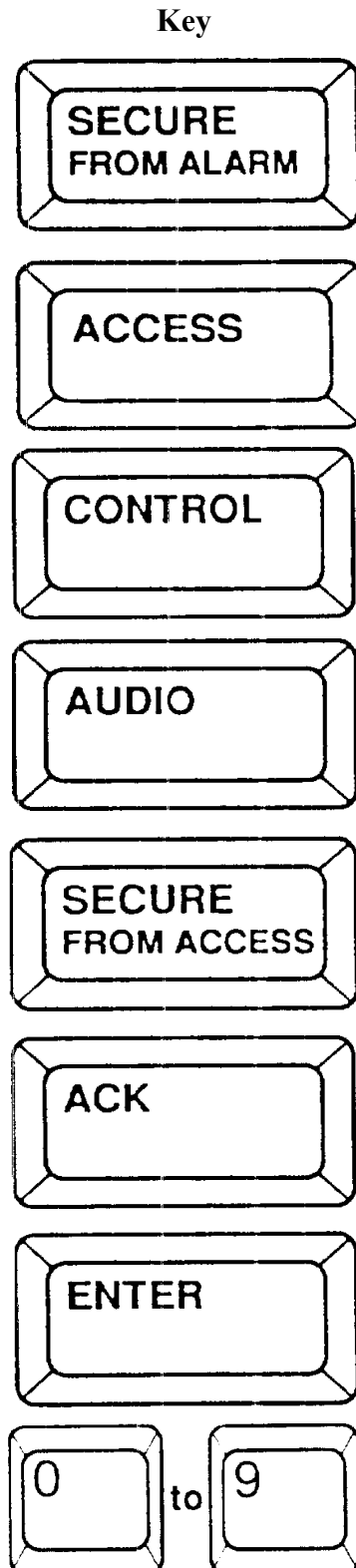
## 5.2.4 Failure Messages

The following failure messages are displayed under the operator prompt box at the bottom of the screen:

<b>Message:</b>	COMM LINE
<b>Description:</b>	A flashing L is displayed in the associated zone, indicating there is a communications failure between the computer and the transponders.
<b>Response:</b>	Check for cuts or shorts and repair.
<b>Message:</b>	AUDIO LINE
<b>Description:</b>	A flashing A is displayed in the associated zone, indicating a failure in the audio line.
<b>Response:</b>	Check for cuts or shorts and repair.
<b>Message:</b>	MAP <number>
<b>Description:</b>	The communication between the indicated map or relay interface and the computer has failed.
<b>Response:</b>	If major repairs are necessary, notify the security manager. The security manager should enter into the configuration mode of the Miniplex IIIA program and delete the faulty map. After the map has been reinstalled the security manager should configure it back into the system.
<b>Message:</b>	PRINTER
<b>Description:</b>	The printer is no longer in operation.
<b>Response:</b>	Refer to the manufacturers manual that was shipped with the printer. Service the printer. When task is complete put the printer back on line. If the printer still does not operate it may need repair.
<b>Message:</b>	BUFFER OVERFLOW
<b>Description:</b>	This message displays above the printer error message. When the printer is disabled the site events will continue to be stored in a 2000 character MAX buffer. If the printer has been out of operation long enough for the buffer to fill, the messages will start to overflow. When this happens the overflow messages are lost. When the printer is again operating, only the messages stored in the buffer will be printed.

### 5.3 Keypad Functions

The keypad is used to respond to system events. Pressing a function key changes the message in the prompt window at the bottom of the screen. The keypad functions are:



#### Function

Used to clear an indicated alarm after conditions have been returned to normal (i.e., points restored from an alarm).

Prevents sensor contact activities from being annunciated as an alarm by the computer. Supervised sensors of the same zone will continue to be monitored.

Allows the operator to turn on a transponder relay associated with the zones indicated on the computer monitor by the letter C. (The transponder relays can be jumpered to be NO or NC).

Used to toggle the audio on/off for a zone with audio capability.

A secure zone monitors alarms and supervises sensors. This function key is used to remove a zone from ACCESS.

Used to respond to an alarm. ACK turns off the alarm beeper and the blinking message associated with the alarm.

Enters/stores selected data in the computer.

The numeric keys are used to make selections in response to prompts, and to enter numeric information in the fields indicated on the screen.

## 5.4 System Monitoring

This section gives different events (acknowledging an alarm, securing an alarm, etc.), the operator's response to the event, and the results of those responses.

### 5.4.1 Acknowledging a Security or Supervisor Alarm

**Event:** The alarm is on the operator's screen and is represented by a double asterisk \*\* flashing in the **ALARM** field or the **SUPERVISION** field under the associated zone.

**Response:** Press **ACK**.

**Result:** The beeper is silenced, and the symbol \*\* stops flashing. The steady \*\* indicates that the point on the transponder has not been restored to a non-alarm state and the condition that caused the alarm has not been corrected. If a single \* is displayed after the operator presses **ACK**, it indicates that the point has been restored to a secured, non- alarm condition.

### 5.4.2 Securing a Zone from Alarm

**Event:** The beeper has been silenced, as per 5.4.1 above, and the symbol for the point shows a single asterisk (\*), signifying the alarm condition has been restored to a secured condition.

**Response:** Press **SECURE FROM ALARM**, type the <zone number>, and press **ENTER**.

**Result:** The single asterisk (\*) will be replaced on the monitor with a green bar under the associated zone. The green bar indicates that the zone is in a secure condition.

### 5.4.3 Placing a Zone in Access

**Event:** The point shows a steady (acknowledged alarm) with either a double or single asterisk or the point shows a green bar, secure condition

**Response:** Press **ACCESS**, type the <zone number>, and press **ENTER**.

**Result:** ACC will be displayed in the alarm portion of that zone.



#### 5.4.4 Securing a Zone from Access

- Event:** The point shows ACC in the alarm portion of that zone.
- Response:** Press **SECURE FROM ACCESS**, type the <zone number>, and press **ENTER**.
- Result:** ACC will be replaced with a green bar if the zone is secure, otherwise the point will begin flashing double asterisks (\*\*), indicating the zone is in alarm. See *Acknowledging a Security or Supervisor Alarm* above.

#### 5.4.5 Acknowledging a System Fault (Communications line or Audio Line Failure)

- Event:** When the computer detects a communication line or audio line failure, a prompt is flashed at the bottom of the screen. It reads:

COMM LINE

or

AUDIO LINE

- A flashing L or A is displayed in both the alarm and supervision fields under the associated zone number.
- Response:** Press **ACK**.
- Result:** The beeper is silenced, and the symbol L or A stops flashing. This condition will not clear until the problem has been corrected and the operator performs the *Securing from Communications or Audio Line Failure* procedure shown below.

#### 5.4.6 Securing from Communications or Audio Line Failure

- Event:** A zone displays a steady L or A in the alarm and supervision points and the message:
- COMM LINE
- or
- AUDIO LINE
- is displayed at the bottom of the screen.

- Response:** Press **SECURE FROM ALARM**, type the <zone number>, and press **ENTER**.
- Result:** The L or A is no longer displayed under the associated zone. The message at the bottom of the screen will not clear until a supervisor enters the configuration screen and returns to the operator's screen. See *Clearing System Fault Prompts*.

#### 5.4.7 Acknowledging a Map or Printer Failure

- Event:** A failure message is flashing under, the operator's prompt box at the bottom of the screen. It reads:  
MAP <zone number>  
or  
PRINTER
- Response:** Press **ACK**.
- Result:** The message will stop flashing and the computer will stop beeping. See *Clearing System Fault Prompts* below.

#### 5.4.8 Clearing System Fault Prompts

- Event:** A prompt is displayed at the bottom of the screen. It reads one or more of the following:  
COMM LINE AUDIO LINE MAP PRINTER
- Response:** Enter the system configuration screen using the sequence described in Section 4, *Site Configuration*. Select **RETURN TO MONITORING SCREEN**.
- Result:** The faults that have been corrected will be deleted from the bottom of the screen.

### 5.4.9 Selecting an Audio Zone for Monitoring

- Event:** The operator wishes to listen to the audio line originating at a particular zone. The transponder must have been configured for audio operation simplified by an A in normal video mode on the SELECT line under the desired zone.
- Response:** Press **AUDIO**, type the <zone number>, and press **ENTER**.
- Result:** The A on the SELECT line under the zone number will appear in reverse video mode. The audio speaker will begin to output the sounds originating at that zone. Repeating the response will return the A to normal video and turn off the audio circuit from that zone. If a new zone number is entered, the A for that zone will appear in reverse video and the audio speaker will output sounds originating from that zone.

### 5.4.10 Selecting a Control Zone to Activate or Deactivate

- Event:** The operator wishes to select a control point to activate a CCTV camera, turn on a light, etc. The transponder must have been configured for control operation signified by a C in half tone on the SELECT line under the desired zone.
- Response:** Press **CONTROL**, type the <zone number>, and press **ENTER**.
- Result:** The C on the SELECT line under the zone number of the selected control transponder will appear in reverse video mode. The relay on the transponder will energize, giving the desired output on the terminal points. Repeating the response will put the C back to normal video and de-energize the relay.



# *Section 6*

## *Maintenance*

---

### **6.1 Miniplex IIIA System Maintenance**

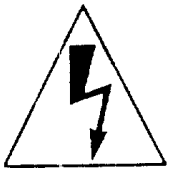
The Miniplex IIIA system is composed of trunk cables, high-voltage transient protectors, transponders, and contact-point sensors installed throughout the site. In general, the maintenance of the installation will consist of periodic inspection of the installed trunk cable, all points of connection, all the connectors, and all the associated hardware.

In areas that have major seasonal changes, it would probably be wise to make two complete inspections: one at the end of winter and one at the end of summer. (After the winter storms are over, and after a humid hot summer). Repair any worn connections, use desiccant as required, and be sure the attaching hardware is secure.

## 6.2 Computer Maintenance

The computer used for the Miniplex IIIA is no more fragile than a television set. Follow these few suggestions and the computer will be operable for a very long time.

1. Give the computer plenty of space so that air can circulate on all sides. Be sure air can circulate around each of the ventilation slots. Don't place the computer on thick-pile carpet or upholstery, and don't place anything on top of it while it is powered up.
2. Be careful not to spill liquids on the computer.
3. It is fine to keep the computer powered up even when it isn't in use. Remember to turn down the brightness, because the screen phosphor will be damaged by extended operation with a static scene.



---

**Warning:** The computer contains extremely high-voltage components that retain an electrical charge, even after the computer is powered down.

---



---

**Safety Note:** The computer is intended to be electrically grounded. It is equipped with a three-wire grounding type plug. This plug will only fit into a grounding-type AC outlet. If the plug cannot be inserted into the available outlet, contact a licensed electrician to replace the outlet and if necessary, install a grounding conductor.

---

### 6.3 Keypad Maintenance

The Miniplex IIIA keypad requires no routine maintenance. If you wish to clean the exterior and the keys, use a soft cloth dampened in a mild detergent solution. **DO NOT IMMERSE** either the keypad or the cable.

Try not to spill anything on the keypad. It can be ruined by a spilled soft drink, or anything that leaves a sticky residue. If you spill something on the keypad:

1. Disconnect the keypad by removing the cable from the computer rear panel.
2. Tilt the keypad to allow the liquid to drain.
3. Allow the keypad to dry 8 hours at room temperature before reinstalling it for operation.

## 6.4 Printer Maintenance

The printer requires some routine maintenance such as changing the ribbon and cleaning. Reasonable care of the printer will extend its life. Refer to the manual that is shipped with the printer for detailed information. The following is generally recommended:

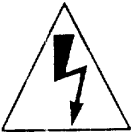
1. Keep all liquid away from the printer. Spilling liquid into the printer can cause severe damage.
2. Do not block air flow around the printer, and do not place books, paper, or other items on top of the printer.
3. Take special care to protect the printer if it is in an unfriendly environment, such as a machine shop, or a dusty or sandy area, etc.
4. The life of the print head can be extended by:
  - a. Not operating the printer without paper and a ribbon cassette installed.
  - b. Not obstructing the movement of the print head while in operation.
5. If the printer is not going to be used for a long period of time, then unplug the power cord.
6. Cleaning is the most important maintenance procedure. The frequency of cleaning depends on the environment.
  - a. Turn the power OFF.
  - b. Clean the case and covers with a soft cloth. Use any mild commercial cleaner.
  - c. Remove the top and the smoked plastic covers. Vacuum or dust the inside area of the unit. Be very careful not to damage the flex ribbon cable and the carriage drive belt.
  - d. The platen should be cleaned only with denatured alcohol.
  - e. The carriage guide bar can be lubricated with a very light oil.



## 6.5 Power Supply Maintenance

The manual for the optional UPS-III A power supply that is shipped with the unit should be read carefully. Pay particular attention to the troubleshooting tables on page 12 and 13 of that manual.

If a fully charged battery voltage measures less than 12 VDC the battery needs to be replaced. The battery charging circuit must be turned off (via the main switch) to measure the battery output. Contact Stellar Systems or the manufacturer for replacement batteries.



---

**Warning:** Only use the batteries supplied with the UPS-III A.

---



# Appendix A

## Connector Pinouts

### A.1 RS-232 Serial Port

The RS-232 port on the PS/2 computer is a standard 25-pin plug (male pins) RS-232 connector. The pin functions are shown in Figure A-1.

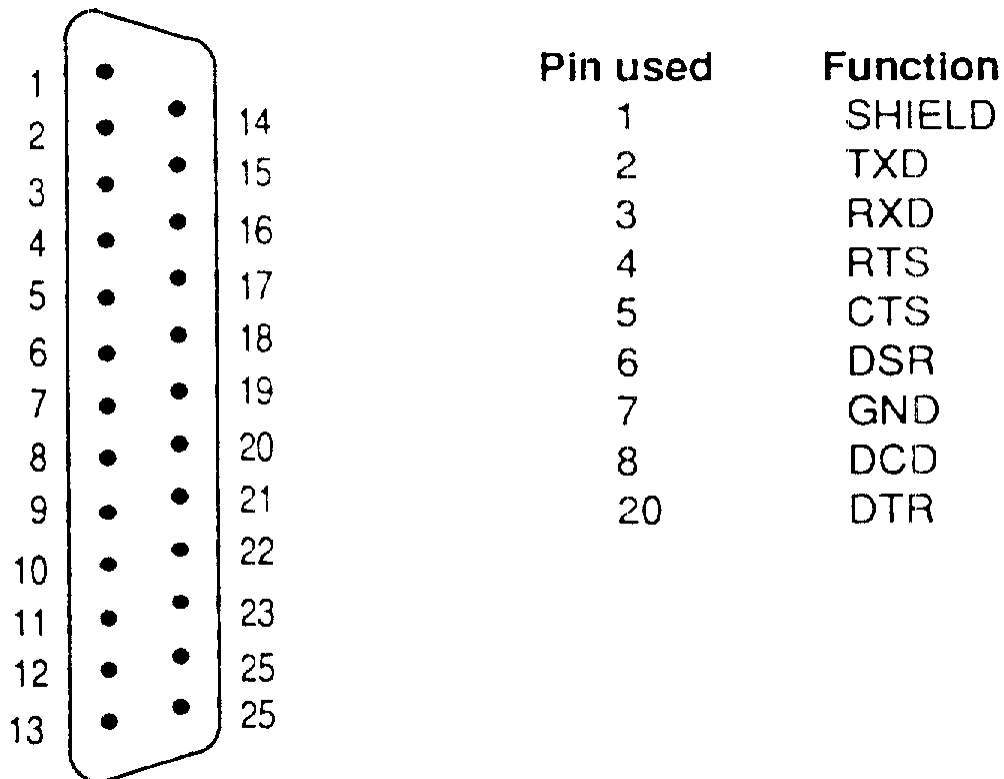


Figure A-1. RS-232 Serial Port Pinouts

## A.2 Parallel (Printer) Port

The printer port on the PS/2 computer is a standard 25-pin socket (female pins) parallel connector. The pin functions are shown in Figure A-2.

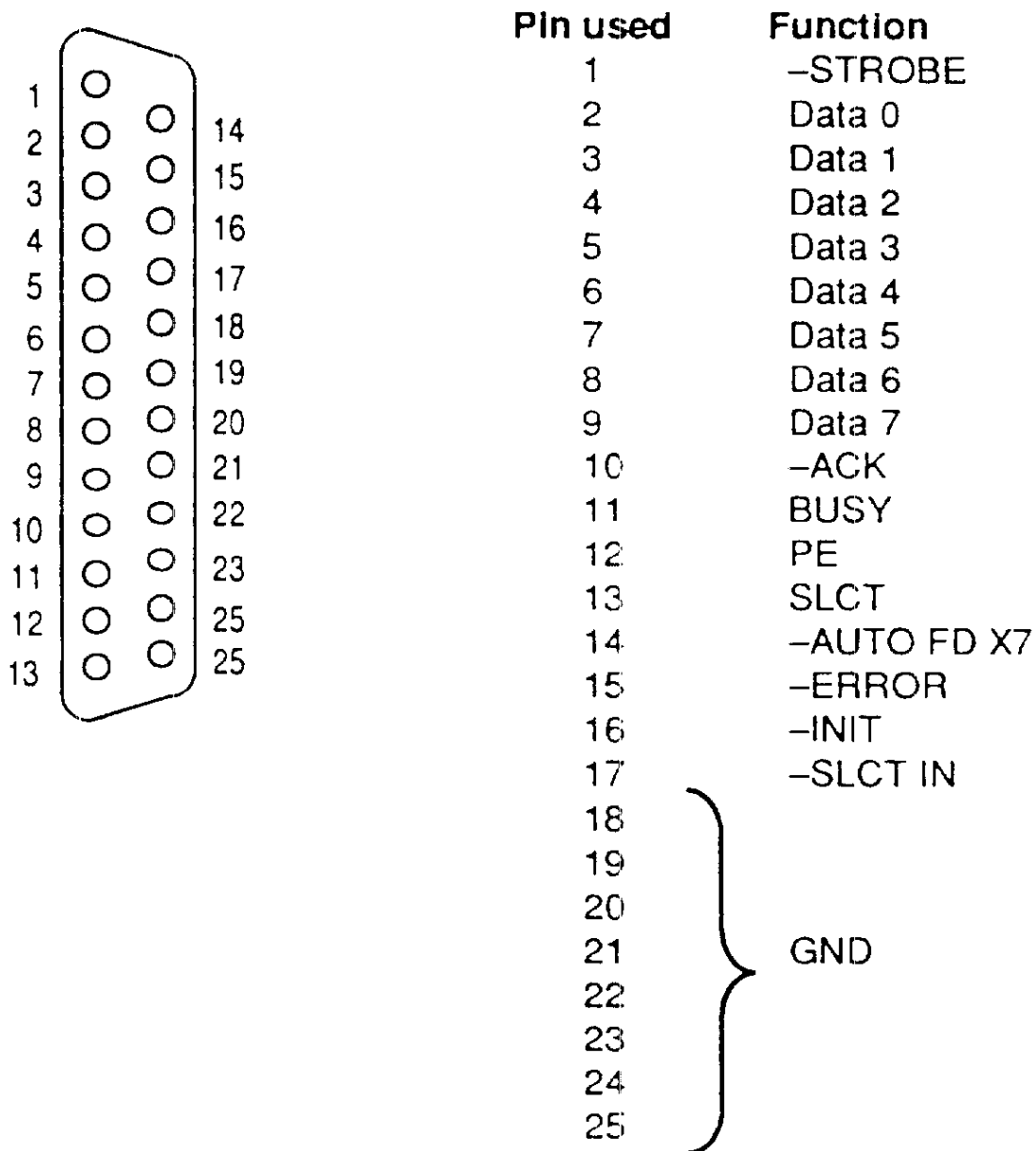


Figure A-2. Parallel Port Pinouts

### A.3 RS-422 Port

The Local Map/Relay and relay interface RS-422 port is a standard 9-pin socket (male pins) subminiature D connector. The pin functions are shown in Figure A-3. The cable assembly number is 00880-25.

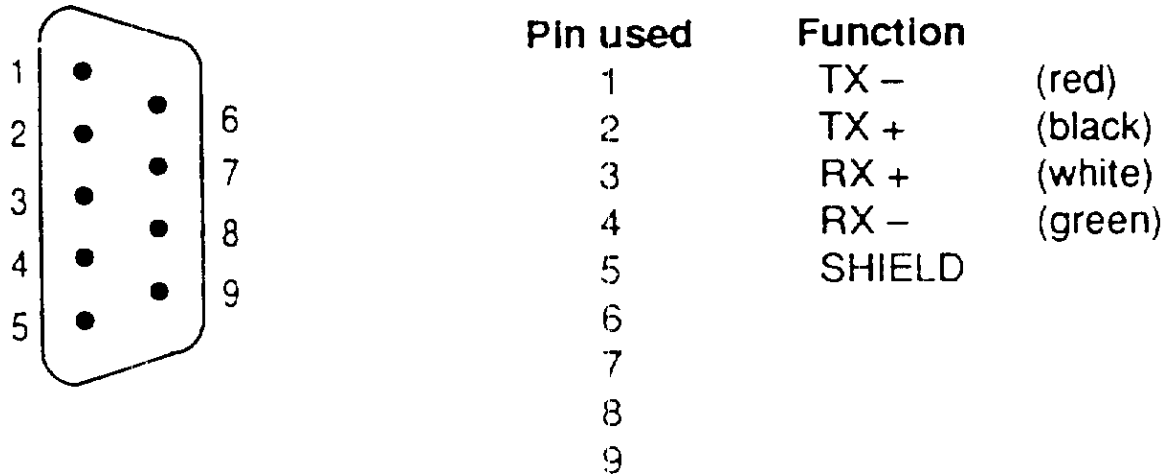


Figure A-3. RS-422 Port Pinouts

### A.4 Trunk Cable Ports

The trunk cable A and B ports are standard 9-pin sockets (female pins) connectors. The pin functions are shown in Figure A-4. The cable assembly number is 00893-25.

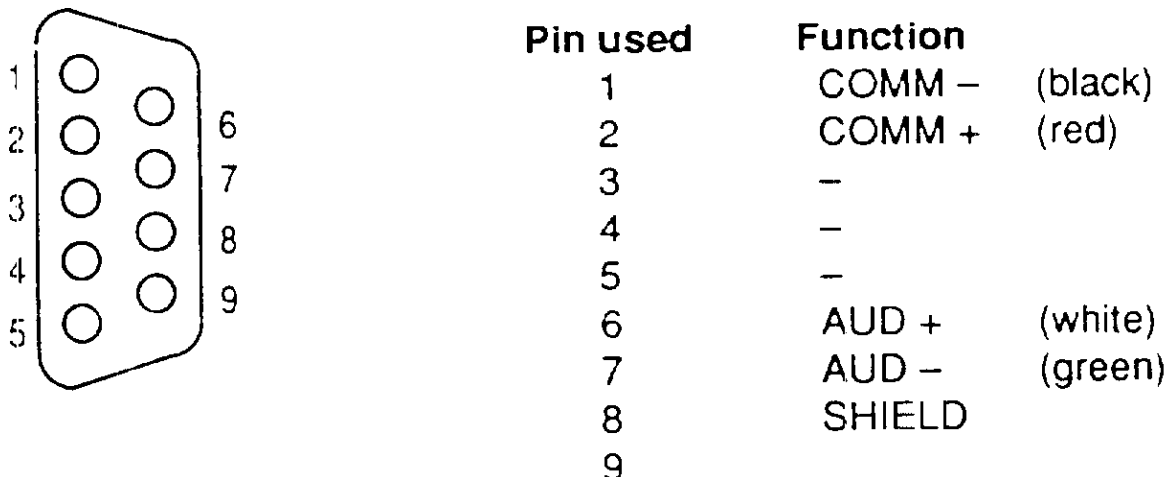
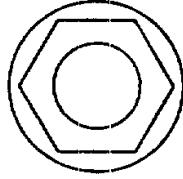


Figure A-4. RS-422 Port Pinouts

## A.5 Phono Jack

The audio connector used to connect the optional speaker to the PS/2 computer is a standard 3.5 mm mono phono jack. See Figure A-5.



**Figure A-5. Phono Jack**

# Appendix B

## Miniplex IIIA Computer

### B.1 General

The Miniplex IIIA uses an IBM 80286-based Computer with a color monitor as its controller. Figure B-1 shows the front of the computer, Figure B-2 shows the rear of the computer. The proprietary software that controls the operation of the Miniplex IIIA resides in EPROM on the Trunk card installed in the computer. Site configuration information is stored in non-volatile memory on the Trunk card.

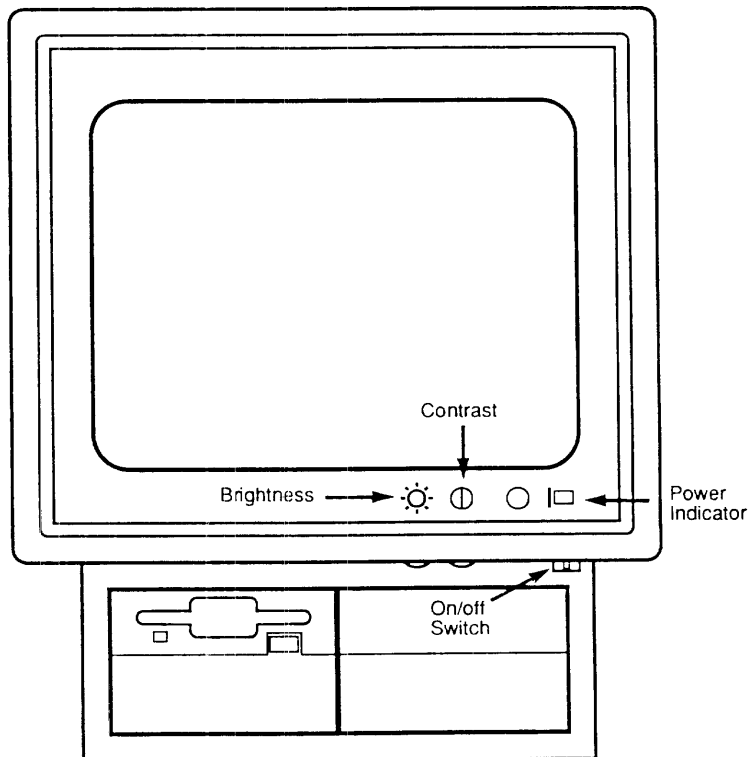
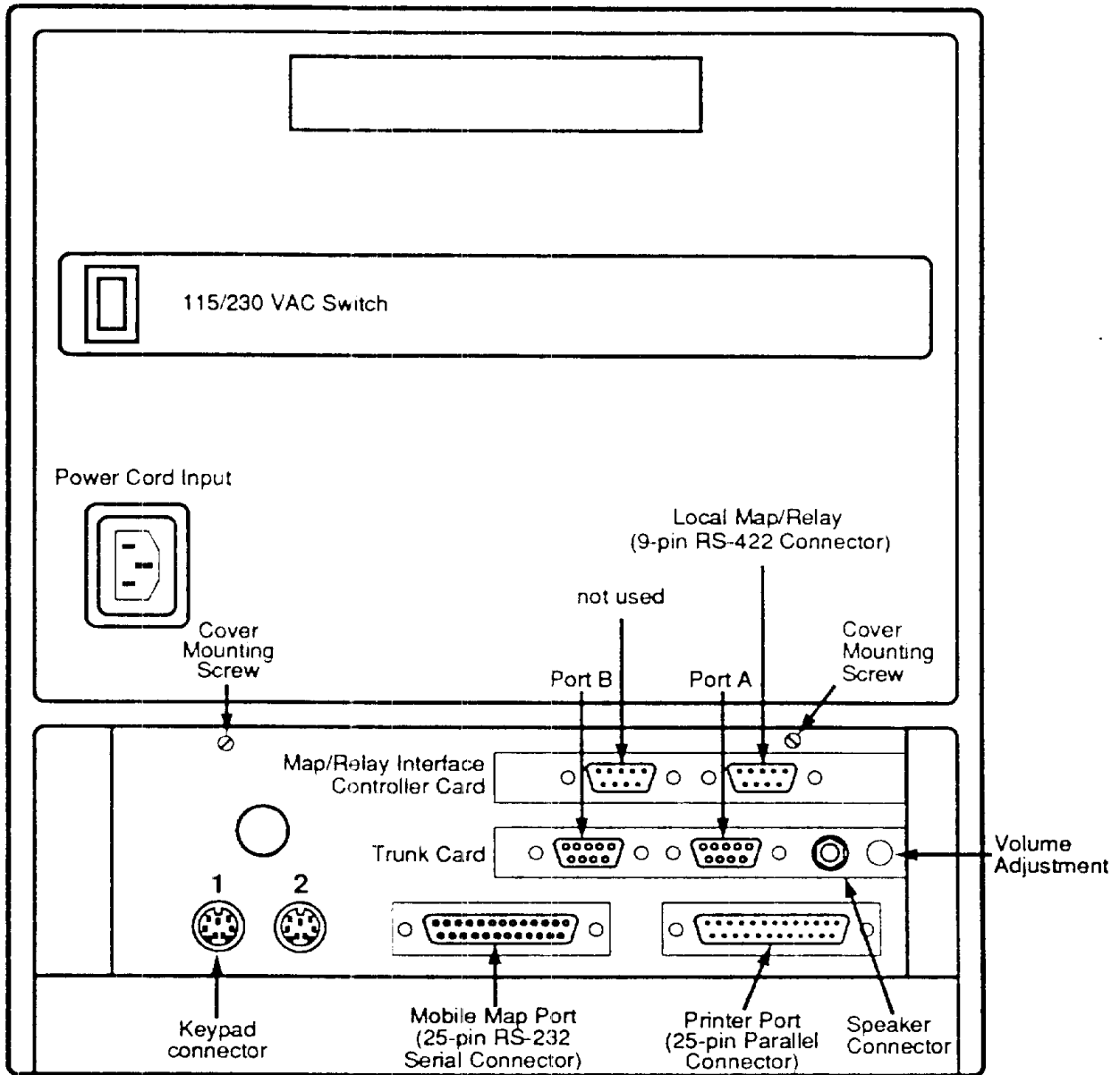


Figure B-1. IBM PS/2 Model 25 Computer, Front View



**Figure B-2. IBM PS/2, Model 25 Desktop Computer, Rear View**

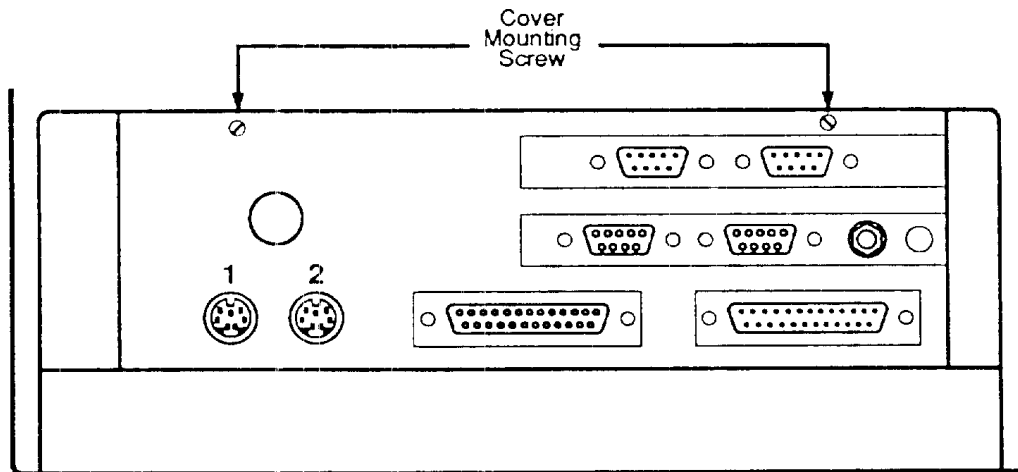
For a more detailed description of the controls and the operation of the computer, see the IBM Documentation included with the Miniplex IIIA.



## B.2 Opening and Closing the Computer

### B.2.1 Opening the Computer

1. Ensure that the computer is turned off. Make a note of all cords and cables connected to the computer and then disconnect them.
2. Carefully lay the computer face down on a padded flat surface.
3. Remove two cover mounting screws located on top edge of lower rear panel (see Figure B-3).



**Figure B-3. Cover Mounting Screws of the PS/2 Model 25**

4. Lift the bottom of the cover approximately 1 inch (25.4 mm) and pull up and out.
5. Disconnect the internal cable harness from the cable hook before bottom cover is lowered.
6. Swing the cover out and down. Refer to Figure B-4.

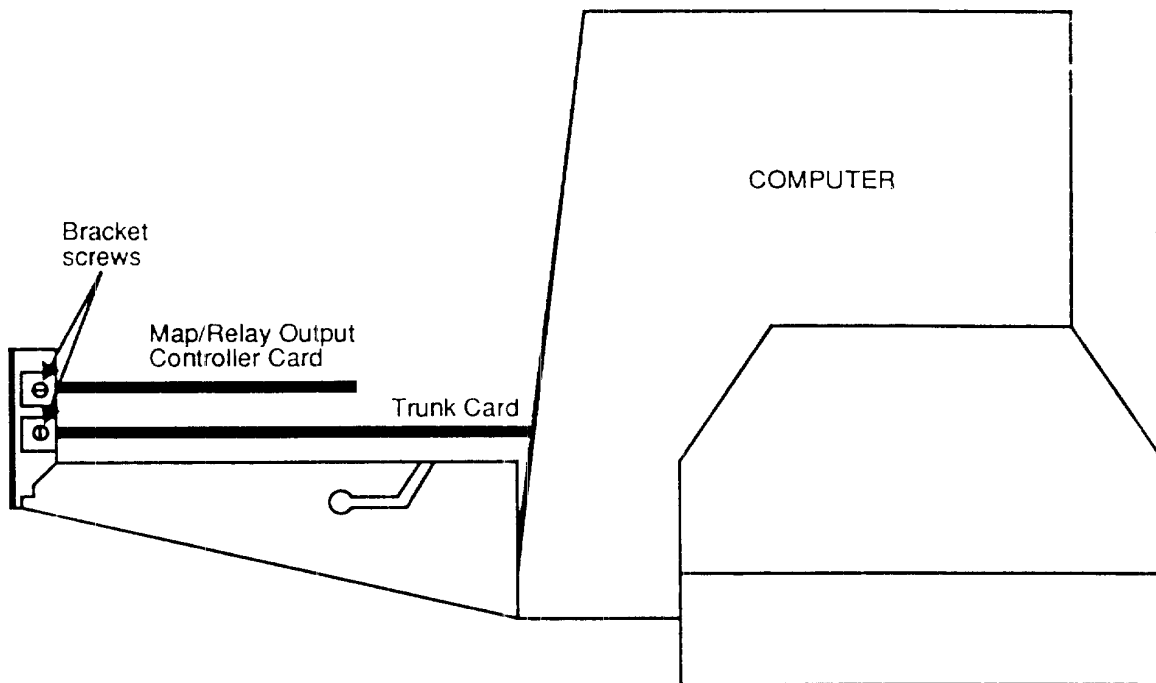


Figure B-4. Side View of Card Slots In the PS/2 Computer

### B.2.2 Closing the Computer

1. Lift and close cover. Lace internal cable harness through the cable hook before closing cover. Be careful not to pinch the cables attached to the system when closing the cover.
2. Install the two (2) cover mounting screws.
3. Set the computer upright.
4. Connect all cords and cables that were disconnected when the cover was removed.
5. Before connecting any external options to the computer, turn off the computer and all peripheral equipment to which it is connected.

### B.3 Installing the Trunk Card

The Trunk card for the Miniplex IIIA is usually factory installed before it is shipped to the customer. Stellar recommends that this card be installed by trained personnel. If required, call Stellar Systems for assistance.

---

**Note:** For detailed instructions on installing a card in the IBM PS/2 computer, please refer to the set of IBM PS/2 manuals shipped with the Miniplex IIIA.

---

1. Open the computer if it is not already open, after first making sure that the power is off. See Section B.2, *Opening and Closing the Computer*.
2. Locate the two bus connectors used for expansion cards. See Figure 3-2. The Trunk card must be installed in the lower of the two slots, toward the motherboard.
3. Remove the screw holding the bracket that covers lower opening in computer rear panel.
4. Plug the edge connector of the trunk card into the lower slot of the I/O connector of the computer.
5. Slip the other end of the trunk card into the black card support bracket.
6. Replace the screw to secure the bracket mounted on the trunk card (containing the port A and port B connectors), and the trunk card, to the lower opening in the rear panel of the computer.
7. Close the computer (if appropriate to do so at this time). See Section B.2, *Opening and Closing the Computer*.

## B.4 Installing the Map/Relay Interface Card

The Map/Relay Interface card for the Miniplex IIIA is usually factory installed before it is shipped to the customer. Stellar recommends that this card be installed by trained personnel. If required, call Stellar Systems for assistance.

---

**Note:** For detailed instructions on installing a card in the IBM PS/2 computer, please refer to the set of IBM PS/2 manuals shipped with the Miniplex IIIA.

---

1. Open the computer if it is not already open, after first making sure that the power is off. See *Opening and Closing the Computer* in Appendix B.
2. Locate the bus connectors used for expansion cards.
3. Remove the screw holding the bracket that covers the opening in the computer rear panel. Remove the bracket and store it.
4. Plug the 32-pin edge connector of the Map/Relay, Interface card into the bus slot, making sure that the card is firmly seated.
5. Replace the screw to secure the bracket containing the two RS-422 9-pin connectors to the opening in the computer rear panel.
6. Close the computer. See *Opening and Closing the Computer* in Appendix B.

## B.5 Computer Power Installation

1. Check or set the voltage selector switch on the rear panel of the computer (see Figure B-5). Use a small flat blade screwdriver to set the switch. It is set correctly when the desired voltage is displayed. For U.S. and Canada, set the voltage to 115V. For other countries, set the voltage to either 115V or 230V as required.

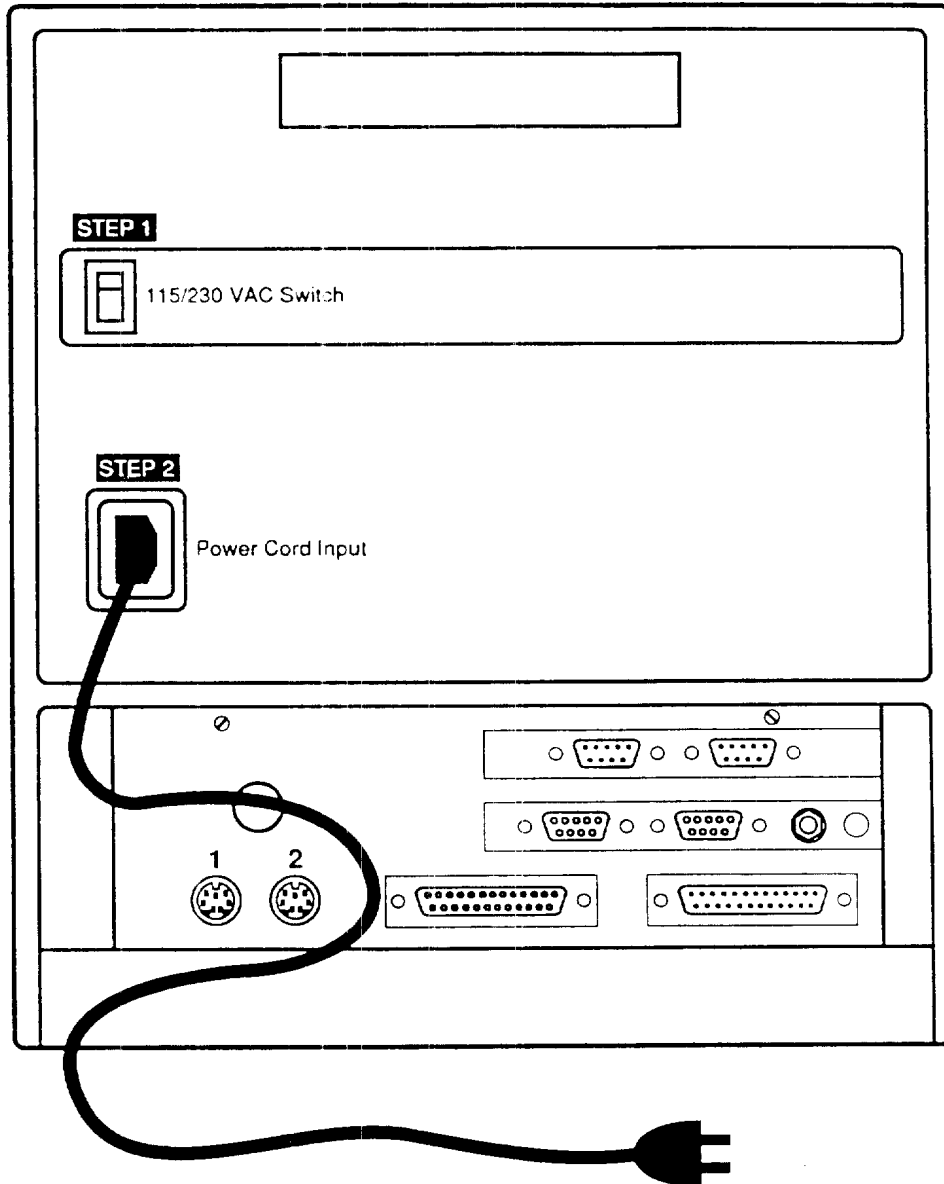


Figure B-5. Computer Power Installation

2. Connect the power cord to the computer rear panel and plug the other end into a properly grounded AC electrical outlet.

## B.6 Connecting the Keypad

Connect the Keypad cord to Port 1 on the computer rear panel, as shown in Figure B-6. The connector is keyed so that it can only be inserted one way. Position the keypad in front of the computer.

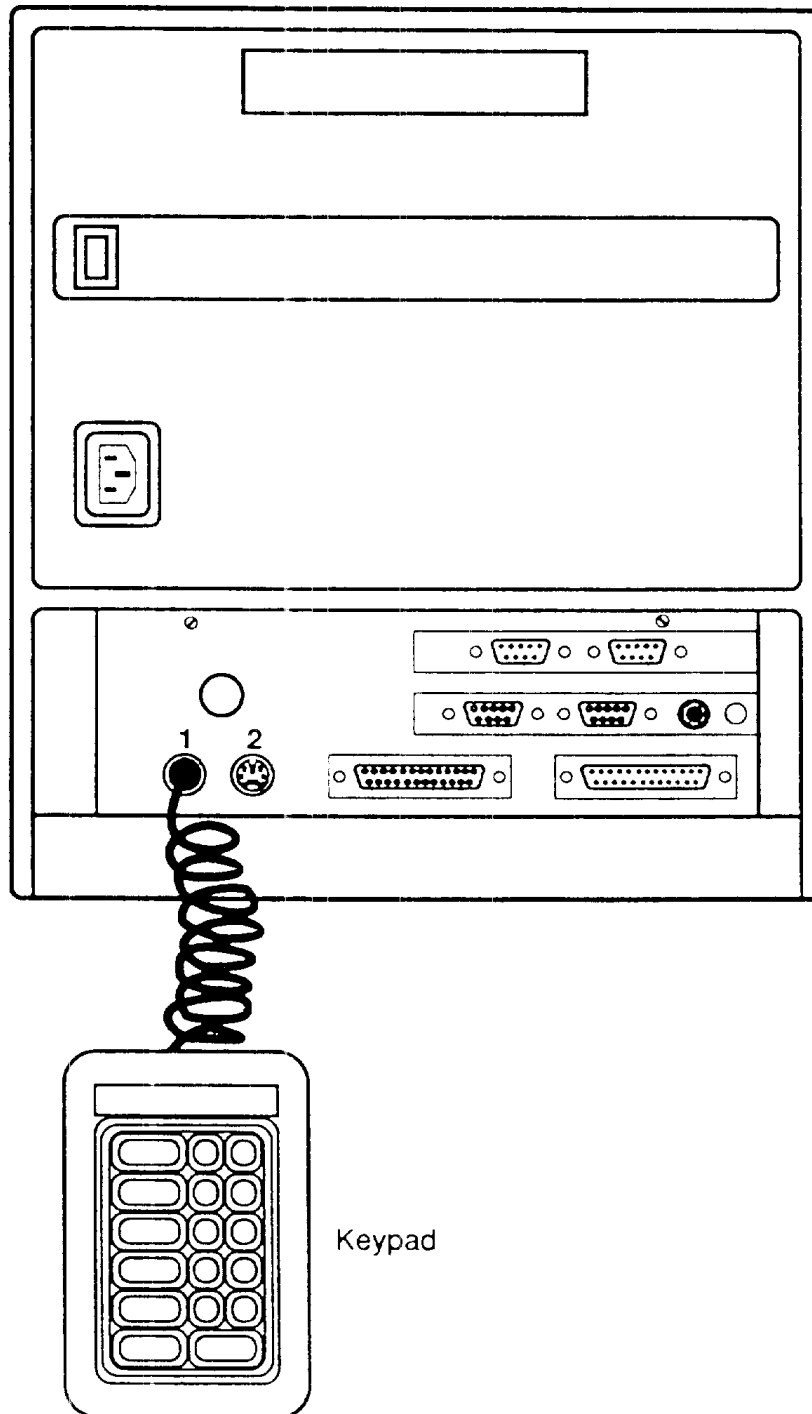


Figure B-6. Connecting the Keypad

## B.7 Printer Installation

1. Position the optional parallel printer (model PR-105) recommended for use with the system near the computer so the printer cable can reach the computer rear panel.

**Note:** Before installing the printer please read the manual supplied by the printer manufacturer.

2. After the printer is assembled as per the instructions in the printer manual, plug the printer power cord into a properly grounded electrical outlet (See Figure B-7).

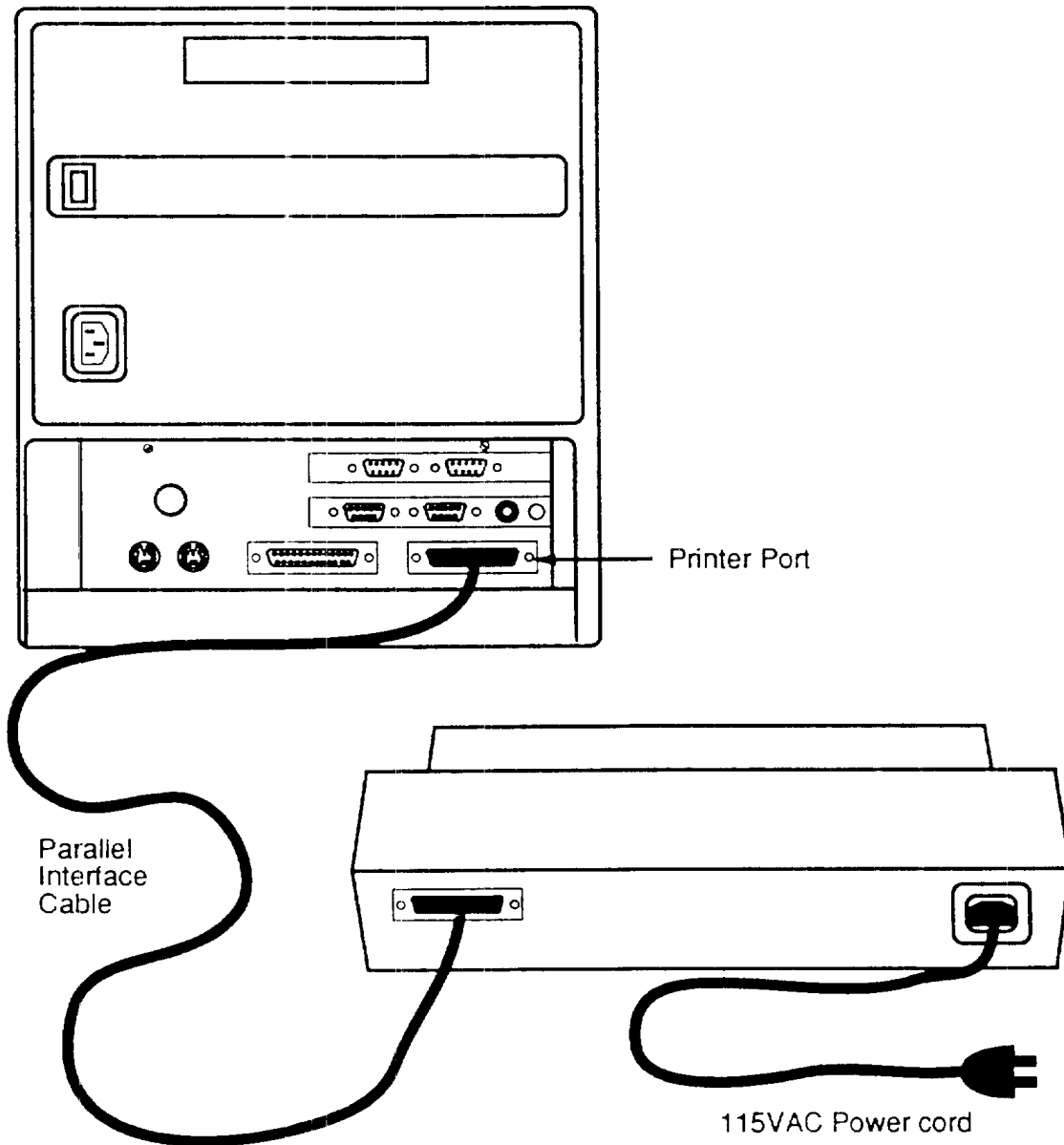


Figure B-7. Printer Installation





## **A**

- access key 1-9
- access password 4-13
- accuracy v
- ack key 1-9
- acknowledging a map or printer failure 5-10
- acknowledging a security or supervisor alarm 5-8
- acknowledging a system fault 5-9
- alarm 5-4
- alarm zones 1-1
- audience v
- audio jack 1-10
- audio key 1-9
- audio level tone generator 1-5
  - specifications 1-5
- AUDIO LINE message 5-6
- audio speaker 1-10
- audio/control transponder 1-4
  - operating temperature 1-4
  - relative humidity 1-4
- audio/control transponders 1-1, 1-18, 1-19, 2-4

## **B**

- BUFFER OVERFLOW message 5-6

## **C**

- cards installed in the computer 1-7
- cautions and warnings vi
- CCTV Interface Diagram 1-16
- clearing system fault prompts 5-10
- clock/calendar 1-7
- closing the computer B-4
- COMM LINE message 5-6
- computer 1-4
- computer maintenance 6-2
- computer power installation B-7
- computer specifications 1-4
- configuring alarm zones 4-6

- configuring maps 4-9
- configuring the system 4-3
- connecting the keypad B-8
- contact point sensors 6-1
- control key 1-9
- control transponder
  - operating temperature 1-4
  - relative humidity 1-4
- control transponder specifications 1-4
- control transponders 1-1, 1-4, 1-18, 1-19, 2-4
- conventions used in this manual v
- copyright ii
- cover mounting screws of the PS/2 B-3
- CPU
  - rack-mounted 1-5
- customer support v
- customer-selected password 1-1

## D

- date/time 5-4
- DIP switches
  - map/relay interface card 1-8
  - trunk card 1-7
- document organization 1-3
- dry contact relays 1-17

## E

- E-Flex cable 1-1
- E-Flex 11 cable sensor 3-17
- enter key 1-9
- entering the site password 4-4
- environmental specifications 2-2
  - cable 2-2
    - cable indoor 2-2
    - cable outdoor 2-2
    - cable temperature 2-2
  - computer 2-2
    - computer AC frequency 2-2
    - computer AC input voltage 2-2
    - computer humidity 2-2
    - computer temperature 2-2
  - keypad 2-2
    - keypad AC frequency 2-2
    - keypad AC input voltage 2-2
    - keypad humidity 2-2

- keypad temperature 2-2
- map 2-2
- map AC frequency 2-2
- map AC input voltage 2-2
- map humidity 2-2
- map temperature 2-2
- monitor 2-2
- monitor AC frequency 2-2
- monitor AC input voltage 2-2
- monitor humidity 2-2
- monitor temperature 2-2
- printer 2-2
- printer AC frequency 2-2
- printer AC input voltage 2-2
- printer humidity 2-2
- printer temperature 2-2
- transponders 2-2
- transponders audio 2-2
- transponders battery charger 2-2
- transponders control output relay 2-2
- transponders humidity 2-2
- transponders input contact points 2-2
- transponders power 2-2
- transponders temperature 2-2

EPROM 1-7, B-1

event number 4-19

## **F**

failure messages 5-4, 5-6

FCC vi

features 1-4

Federal Communications Commission vi

functional description 1-6

## **H**

hardware description 1-7

hardware location 2-4

high impedance voltmeter 3-4

high-voltage transient protector installation 3-12

high-voltage transient protector installation diagram 3-12

high-voltage transient protectors 6-1

hourly printout status 4-17

## **I**

IBM PS/2 computer B-1

- induced electrical transients 1-12
- installation overview 3-4
- installation plan 2-4
- installation planning 2-1
- installing the map/relay interface card 3-9, B-6
- installing the trunk card 3-7, B-5

## **K**

- keypad 1-1, 1-4, 1-9
  - function keys 1-9
  - numeric keys 1-9
- keypad function
  - ACCESS 5-7
  - ACK 5-7
  - AUDIO 5-7
  - CONTROL 5-7
  - ENTER 5-7
  - SECURE FROM ACCESS 5-7
  - SECURE FROM ALARM 5-7
- keypad functions 5-7
- keypad maintenance 6-3

## **L**

- LEDs
  - local maps 1-14
- limited warranty iii
- local map installation 3-17
- local map interface diagram 3-17
- local map LEDs 1-14
- local maps 1-8,1-13
- logging printer 1-5
  - specifications 1-5

## **M**

- maintenance computer 6-2
  - keypad 6-3
  - Miniplex IIIA system 6-1
  - power supply 6-5
  - printer 6-4
- MAP message 5-6
- map addresses 1-13
- map configuration screen 4-9
- map display 1-5
  - specifications 1-5

- map/relay interface card 1-8, 2-6, 3-8
  - DIP switches 1-8
- map/relay interface card installation 3-8
- message
  - AUDIO LINE 5-6
  - BUFFER OVERFLOW 5-6
  - COMM LINE 5-6
  - MAP 5-6
  - PRINTER 5-6
- Miniplex IIIA alarm reporting system 1-2
- Miniplex IIIA configuration menu 4-5
- Miniplex IIIA system maintenance 6-1
- mobile map 3-18
- mobile map display 1-5
  - specifications 1-5
- mobile map interface diagram 3-18
- mobile maps 1-1, 1-15

## **N**

- non-configurable numbers 4-18
- non-volatile RAM 1-7
- numeric keys 1-9

## **O**

- opening and closing the computer B-3
- opening the computer B-3
- operating temperature 1-4
- audio/control transponder 1-4
- control transponder 1-4
- operator prompt 5-4
- operator prompts 5-5
- operator screen with site configured 5-2
- operator's screen 4-3, 5-2
- optional equipment 3-3
- options 1-5

## **P**

- parallel port A-2
- password site 1-7
- placing a zone in access 5-8
- power op operator's screen 4-3
- power supply maintenance 6-5
- power up number 4-18, 5-4
- power up operator's screen 3-21

---

- power up screen 4-18
- printer 1-1, 1-11
- printer installation 3-11
- printer maintenance 6-4
- PRINTER message 5-6
- printer on/off status 4-16
- printer output of events 4-19
- product name 5-4
- publication information ii

## **R**

- rack-mounted CPU 1-5
- radio and television interference vi
- related publications 1-3
- relative humidity 1-4
  - audio/control transponder 1-4
  - control transponder 1-4
- relay interface 1-1
- rev number 5-4
- revision number 4-19
- RS-232 interface 1-15
- RS-232 protocol 3-19
- RS-232 serial port A-1
- RS-232 serial port pinouts A-1
- RS-232/radio interface card 1-15
- RS-422 interface 1-14
- RS-422 port A-3
- RS-422 port pinouts A-3

## **S**

- screen fields 5-4
- screen symbols 5-3
- secure from access key 1-9
- secure from alarm key 1-9
- securing a zone from access 5-9
- securing a zone from alarm 5-8
- securing from communications or audio line failure 5-9
- security manager procedures 4-2
- security manager screens 4-2
- select 5-4
- selecting a control zone to activate or deactivate 5-11
- selecting an audio zone for monitoring 5-11
- sensors installation 3-17
- setting password for changing secure to access 4-13
- setting the clock/calendar 4-14

- setting the DIP switches on the map/relay interface card 3-8
- setting the site password 3-6
- setting transponder addresses 3-16
- side view of card slots in the PS/2 computer B-4
- site activity record 1-11
- site configuration 1-1, 1-7
- site configuration information B-1
- site configuration screen 4-6
- site overview 4-7
- site overview screen 4-8
- site password 1-7
- speaker module 1-5, 1-10
  - specifications 1-5
- speaker module installation 3-10
- specifications 1-4
  - audio level tone generator 1-5
  - audio/control transponder 1-4
  - computer 1-4
  - control transponders 1-4
  - environmental 2-2
  - keypad 1-4
  - logging printer 1-5
  - map display 1-5
  - mobile map display 1-5
  - speaker module 1-5
  - transient protector kit 1-5
  - uninterruptible power supply 1-5
- standard equipment 3-3
- supervisory zones 1 -1
- suprv 5-4
- system monitoring 5-8
- system programming 1-1

## **T**

- tone generator 3-4
- tools required 3-4
- trademarks ii
- transient protection 2-4
- transient protection module 1-12
- transient protector kit 1-5
  - specifications 1-5
- transponder
  - audio/control 1-4
  - control 1-4
- transponder address byte 1-6
- transponder command byte 1-6

- transponder communication error 1-6
- transponder installation 3-15
- transponder installation wiring diagram 3-15
- transponder locations 2-4
- transponder polling 1-6
- transponder status byte 1-6
- transponders 1-18, 6-1
- trunk cable 1-12
- trunk cable connection to computer 3-14
- trunk cable diagnostics 1-7
- trunk cable installation 3-14
- trunk cable pinouts 3-14
- trunk cable ports A-3
- trunk cable requirements 2-3
- trunk cables 6-1
- trunk card 1-6, 1-7, 3-10, 13-1
- trunk card DIP switches 1-7
- trunk card installation 3-6
- trunk card showing the password DIP switches 3-6
- two-zone transponders 1-1

## U

- uninterruptible power supply 1-1, 1-5
  - specifications 1-5
- unpacking the equipment 3-2
- UPS 1-1, 1-17

## V

- vehicle radio 1-15
- verifying shipment contents 3-3
- verifying the installation 3-21
- video switcher 1-1, 1-16
- volume 5-4

## W

- warranty
  - limited iii

## Z

- zones 5-4



## **Copyright**

Copyright © 1993

Stellar Security Products, Inc  
1223 Innsbruck Drive  
Sunnyvale CA 94089-1317

All rights reserved. No part of this publication may be reproduced or used in any form or by any means; graphic, electronic, or mechanical including photocopying, recording, taping, or information storage and retrieval systems; without written permission of Stellar Security Products, Inc.

## **Trademarks**

The Stellar Security Products, Inc. logo is a registered trademark of Stellar Security Products, Incorporated. Miniplex IIIA is a trademark of Stellar Security Products, Inc.

## **Publication Information**

Part Number 400605-000, Revision A  
Printed in U.S.A., June 1993