AeGIS 8000 Series Quick Installation Guide

The Quick Guide will guide you through the installation without reading the entire manual. If you are an entry-level installer, you may need to read the manual to get more understanding on the AeGIS 8000 Series. **The Pach & Company complete Installation Manual and Management Software instruction is in the CD-ROM.** **Technical support is available Monday-Friday between 7:30 AM – 4:30 PM Pacific Standard Time. Visit our Web Site www.pach-co.com**

Toll free 1-888-678-7224

Introduction

The Pach & Company Compact Disc (CD) contains **AeGIS 8000 Series Management Software**, **Installation and Program Manual** and **Adobe PDF Reader Version 4.0** (Adobe PDF Reader is licensed to Adobe, you may also download it from www.adobe.com free of charge). You must have Windows '95 or'98 in your computer. The Adobe PDF Reader must be installed in your computer in order to open and print the Installation and Program Manual. Please leave the CD for the user.

Warranty

The AeGIS 8000 Series come with **two (2) years warranty for parts and labor**. The warranty does not cover a labor to uninstall and reinstall the system(s). We will include lightning strikes in our two years warranty if surge protection is installed with the system. The above warranties are subject to the following conditions.

- The serial number on the printed circuit board must match the serial number on the cabinet.
- The system's failure is not caused by vandalism, improper installation, misuse or abuse.
- Physically damaged product is not acceptable for repair or exchange within or after warranty.
- The warranty will be void and null if the product has been repaired or modified by unauthorized party without authorization of Pach and Company Technical Department.
- If for some reason your system cannot be repaired, Pach and Company will replace it with an identical product of equal value.
- You must obtain a Return Merchandise Authorization (RMA) number from Pach and Company Technical Department before you can send back the product to factory for repair.
- You are responsible for all transportation and insurance charges for the products shipped to the Pach and Company repair center.

Technical Specification

Power Input: 12Vac/dc 40VA UL Listed Transformer (Pach supplied)
Current Consumption: 290mA idle, 450mA operation
Emergency Battery: 12Vdc, 4Ahr rechargeable (customer supplied)
Telephone Line: Standard voice grade RJ11 jack
Operating Environment: Temp. 0°F to +140°F Relative Humidity 0% to 95% non-condensing
Relay Output: Form C Dry Contact 120 VAC 10A/ 24VDC 10A/ 250VAC 7A
Memory Type: EEPROM
Tone Detection: Crystal controlled, capable of detecting short bursts 80 ms
Ringer Equivalence: 0.6B
Mounting: Surface or Semi-Flush
Construction: 16 Gauge Cold Rolled Steel with Brushed Stainless Steel or Polished Brass Finished Faceplate
Shipping: 11 lbs. Or 5 Kg. Approximate
Dimensions(HWD): 10 13/16 " x 8 9/16" x 3 3/4"
27.5 Cm x 21.9 Cm x 9.5 Cm

NOTE:	Specifications are subject to change without notice.
	The AeGIS 8000 Series can be installed behind a PBX to dial either extensions or outside lines. It cannot dial both.
	The AeGIS 8000's keypad will be activated after a connection with a tenant is established.

Standard features:

- Program and store the tenant's name, directory code, telephone number and personal access code.
- Unlock door or gate remotely by the tenant using his or her telephone keypad.
- Unlock door or gate by the tenant using his or her own private access code.
- Built-in two relays.
- Built-in backlit LCD directory, Built-in Postal Switch.
- Remote programming via Pach & Company Management Software or a touch-tone Phone.
- Event Recording via Pach & Company Management Software.
- Works behind a PBX to dial extensions (analog only) or outside lines.
- Programmable features:
  - ◆ 2, 3 or 4 Digit Directory Code
  - ◆ Lock Out Count
  - ◆ Remote Open door 1 and door 2 (0-9 for touch-tone or 6-9 for pulse).
  - ◆ Manual Unlock-Auto Countdown Re-lock.
  - ◆ 4 Digit Unit master Code
  - ◆ Open Interval
  - ◆ Talk Time

Installation

A proper installation of the AeGIS system is very essential. You MUST follow the installation procedures, block diagrams and installation requirements as specified in this section.

Wiring Requirements

- Two conductors, stranded, 18-gauge minimum, shielded wire for all connections
- Surge protection MUST be installed to include lightning strikes on your two years warranty.
- You must have an active telephone line. You may share the line with your telephone but you are only able to use one equipment at a time. Do not share the AeGIS's line with an Emergency Phone or Fire Alarm.
- ONLY use Class 2 transformer rated 12 VAC (supplied by Pach & Company or 12VDC 40 VA to power the AeGIS 8000.
- Do not run high voltage cables inside the same conduit as the AeGIS System wires.
- The AeGIS 8000 Series can be installed indoor or outdoor.

Power

The AeGIS 8000 can be powered using 12 VAC/40VA (supplied by Pach & Company) or 12 VDC/40VA (not supplied). A battery backup with 12VAC/40VA can be installed as shown on figure 2. The system has a built-in battery charging circuit if 12VAC/40VA transformer is used. If 12VDC/40VA regulated power supply is used see figure 1.
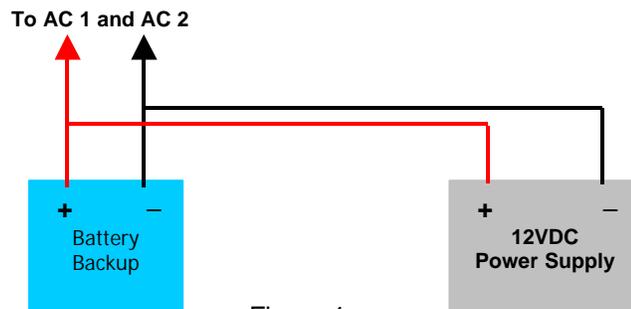
To AC 1 and AC 2

+ **−**
Battery
Backup

+ **−**
12VDC
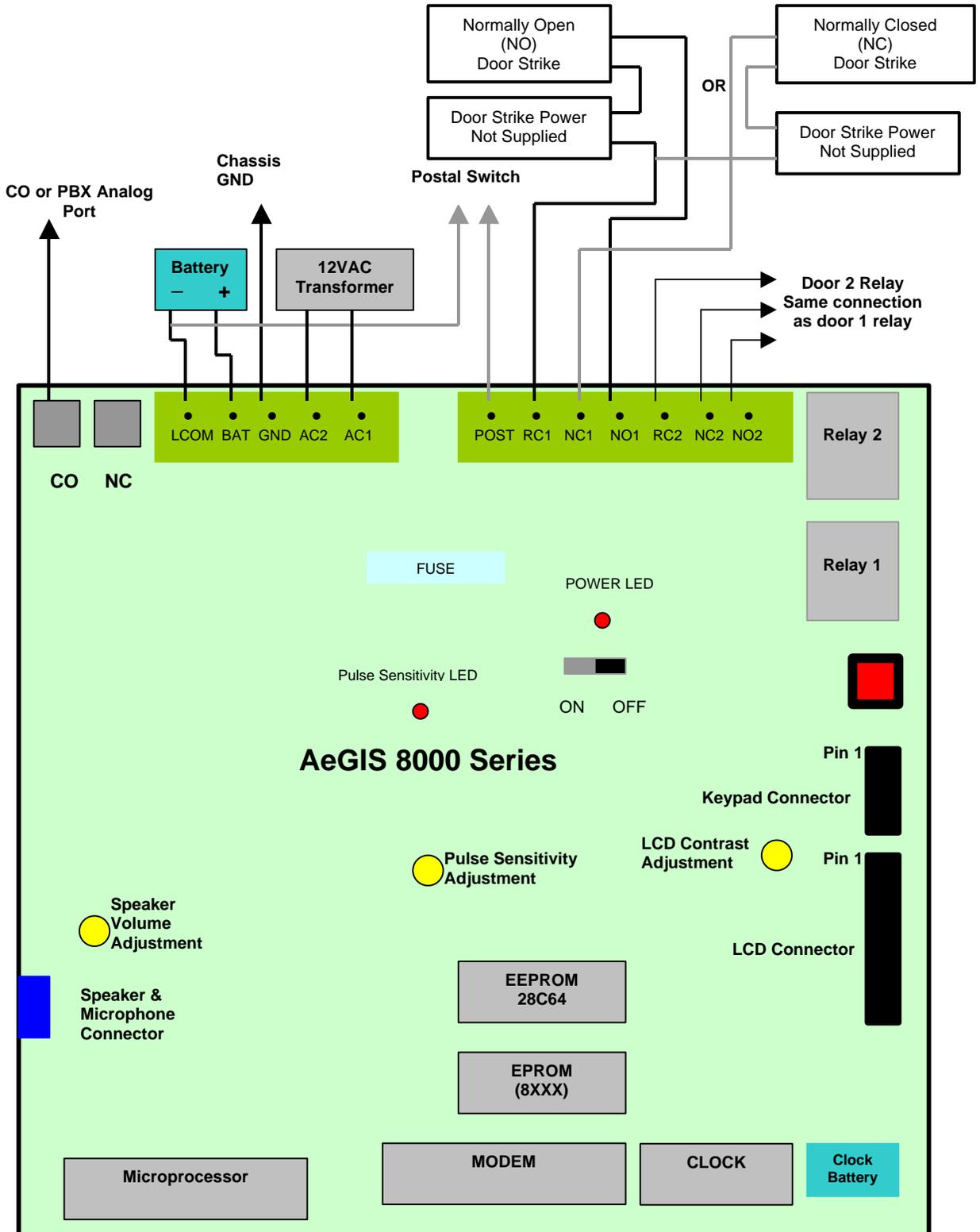**Power Supply**

Figure 1

Figure 2

Grounding

- Install a ground steel rod from the AeGIS steel enclosure to the earth ground.
- Install a solid heavy gauge wire from the AeGIS steel enclosure to a water pipe.
- Connect the AeGIS steel enclosure to any earth grounded steel metal.

Telephone Line

Use AeGIS AC/Telephone Surge protector (ASP-1) to protect your investment. Your AeGIS's warranty will be included against lightning if you install proper surge protection.

- Connect the AeGIS RJ-15 labeled CO to the telephone line. If ASP-1 surge protection is used, see APS-1 instruction. **You MUST use 18 gauge-shielded wire minimum** to avoid radio reception or any other noise problems.

- If a PBX line is used, connect the RJ-15 to the PBX's Analog Port. Do not connect to Port. The AeGIS 8000 Series works behind a PBX to dial either the extensions or outside lines, it cannot dial both(means if a PBX setting is enabled, the system cannot dial the extensions behind a PBX).

Programming

You can program the AeGIS 8000 Series via a **built-in keypad**, **touch-tone phone** or **management software** (supplied by Pach & Company).
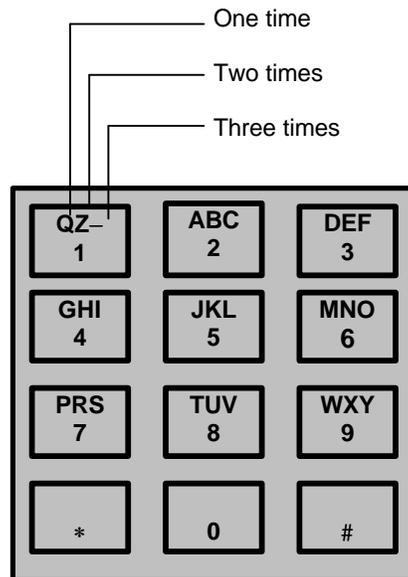
Keypad Correlation

Figure 3

The following are special characters used to move the cursor right or left and erase all.

- Press "0" key once move the cursor to the right.
- Press "8" and "0" key once move the cursor to the left.
- Press "∗" to clear all of the letters or number entered.

Programming via a built-in keypad

Step 1 Press and hold "0" and press "#" and release both keys, **the welcome screen will stop scrolling**. If the welcome screen is still scrolling, repeat this step again.
Step 2 Enter your valid Master Code (Factory default is 0000).
Step 3 Select the Function Code from the table above and press #.
Step 4 Follow the instruction shows on the display.

Function Code	Description	Function Code	Description
*	Exit Programming Mode (Local Programming) or clear the existing program.	17	Set Date
#	To accept program	19	Enable or Disable event Recording.
00	Change Unit master Code.	20	Open Door 1 Number. The tenant can open the door remotely by pressing "9" (default setting) from a touch tone or pulse phone. The number can be changed via programming as follow: Select 0-9 if the system is in touch-tone. Select 6-9 if the system is in pulse. Do not select the same number as door 2.
01	Add a Tenant (New Tenant only). See figure 3 for keypad correlation.	21	Open Door 2 Number. The tenant can open the door remotely by pressing "8" (default setting) from a touch tone or pulse phone. The number can be changed via programming as follow: Select 0-9 if the system is in touch-tone. Select 6-9 if the system is in pulse. Do not select the same number as door 1.
02	Modify a Tenant (Existing Tenant only). See figure 3 for keypad correlation.	40	Master Code Mask (master code will be secured, but if lost, system must be returned to factory.
03	Delete a Tenant	46	Display System Information
04	Clear All Tenants	50	Clear the EEPROM Memory. Clear to factory default.
05	Manual Unlock Door 1 ♦ Enter 01-98 to unlock from 01 hour – 98 hours ♦ 99 to unlock hold. ♦ 00 to lock.	70	Modem Protocol. "0" for Bell "1" for V22
06	Manual Unlock Door 2 ♦ Enter 01-98 to unlock from 01 hour – 98 hours ♦ 99 to unlock hold. ♦ 00 to lock.	71	Enable or Disable Modem. "0" is disabled "1" is enabled for remote programming.
07	Single or Multi-Systems (set for multi if two or more system install on the same phone line).	72	Change Lock-out Count. Can be selected 1-9.
08	System Number (1-8).	73	Select Tone/Pulse Dialing.
09	Directory Digits (2, 3 or 4 digits, default at 3- digit)	74	Enable or Disable Auto Answer

10	Edit Welcome Message (a maximum of 48 characters and 16 characters for each segment).	75	Enable or Disable Key-press Beep (key will beep on initial call or when the access code is used to open the door.
11	Door 1 Open interval (04-99 seconds). The relay will latch from 04-99 seconds.	76	Enable/Disable Speaker Beep when the System Open the Gate/Door. Enabled: the system will beep if the door is opened. Disabled: the system will not beep if door is opened.
12	Door 2 Open Interval (04-99 seconds). The relay will latch from 04-99 seconds.	77	Enable or Disable PBX. Only used if the system is connected to a PBX line and the system must dial the outside lines, otherwise do not enable this function.
14	Set Time (in military time).	78	View Directory and Name. Press "3" to view the next name and # to view the directory associated with the name.
15	Daylight Saving	79	Talk Time (10-180 seconds).
16	Display Date	91	Exit (remote programming only).

System Operations

How to Initiate a Call.	Two ways to initiate call: 1. Press "3" to view tenant's name from A to Z or "6" to view from Z-A, when the tenant name you are intending to call is visible on the display, press # to initiate the call. 2. Press # and wait for dial tone and press the directory code. If Multi systems are installed, the others will display TEL LINE BUSY if one is used.
How to answer the AeGIS calls.	Answer the AeGIS calls and press the associate number to open the door remotely or hang-up if you do not want to open the door. The number to open the door is the number programmed according to the open door 1 and open door 2 number (function code 20 and 21). Default setting is "9" to open door 1 and "8" to open door 2.
How to extend the talk time.	The Talk-Time can be programmed in the system from 10 to 180 seconds. The system will give ONE LONG BEEP ten seconds before the Talk-Time expires. The tenant must press "#" immediately after the long beep to extend the Talk-Time to another cycle. If the Talk-Time is programmed for 30 seconds and it can be extended for another 30 seconds by pressing "#" from the tenant phone after you hear the long beep. Tenant may continue pressing the "#" every time you hear the warning beep to extend the talk time until the conversation is finished.
How to use the voice mail feature.	The AeGIS 8000 Series keypad will be activated after the call is connected even though the function Code 75 is disabled. The purpose of the keypad activated is to allow the user to press an extension number or a voice mail number after the call is connected.

How to Use the Personal Access Code.	Press and hold "0" and press "∗" and release both keys and enter your 4-digit personal access code.
How to call into the AeGIS system.	Dial the AeGIS phone number and ONE SHORT beep will be heard. Press "∗" to talk to the visitor and press the associated number as programmed on function code 20 or 21 to open the door. This feature does not work for multi systems on single phone line.
How to adjust the volume.	The speaker volume and microphone are factory preset. See figure 2 to locate the speaker volume adjustment pot. Turn the speaker volume adjustment pot counter-clockwise to increase or clockwise to decrease the speaker volume. If you hear "feedback" when you close the cabinet's door, decrease the speaker volume.
How to adjust the LCD display.	Turn the LCD Adjustment Pot clockwise to increase or counter-clockwise to decrease the intensity. See figure 2 to locate the LCD adjustment pot.
How to adjust the pulse sensitivity.	- Apply power to the system and connect the phone line. - If the Pulse Sensitivity LED flashes or comes ON, decrease the pulse sensitivity by turning the Pot adjustment clockwise, otherwise proceed to step 3. - If the Pulse Sensitivity LED does not flash or comes ON, press the keypad number 0-9 and the LED should be flashed every time the key number is pressed. If it does not flash, increase the sensitivity by turning the pot counter-clockwise.
How to check the number of tenants on the system.	Press and hold "0" and press "#" and release both keys. The "Welcome Screen" will stop scrolling and then enter your valid 4-digits Master Code. Press "∗" and the display will show the number of tenants.
Postal Switch.	The system has a built-in postal switch. You must get the postal lock from the local post office. The postal switch is Normally Open (NO). If Normally Closed (NC) is used, remove the wire from NO to NC. The postal switch can also be used for exit button or card reader.

Trouble Shooting Guide

SOLUTIONS and SUGESTIONS	
AUDIO PROBLEMS	
No audio when key is pressed.	- Check the speaker and microphone connection on terminal marked CN4 on the board. The snap on clip connector must be facing inside the board. - Check the red and orange wires, make sure they are soldered into the speaker. - Turn the system's power "OFF" and disconnect the speaker connector from the board. The speaker impedance must be 24 ohms.
No dial tone when the # key is pressed.	- Check the phone line using a standard phone, make sure you get a dial tone. - Check the speaker and microphone connection on terminal marked CN4 on the board.

	▪ Check the red and orange wires, make sure they are soldered into the speaker. ▪ Turn the system's power "OFF" and disconnect the speaker connector from the board. The speaker impedance must be 24 ohms.
The visitor can't hear the tenant from the system but the tenant can hear the visitor.	▪ Check the speaker and microphone connection on terminal marked CN4 on the board. ▪ Check the red and orange wires, make sure they are soldered into the speaker ▪ Press the "#" key as soon as you hear a dial tone, tap your finger into the microphone and you should hear the feedback from the speaker.
The tenant can't hear the visitor talking but the visitor can hear the tenant.	▪ Check the speaker and microphone connection on terminal marked CN4 on the board. ▪ Check the brown and black wires, make sure they are soldered into the microphone. ▪ Turn the system's power "OFF" and disconnect the speaker connector from the board. The speaker impedance must be 24 ohms.
DISPLAY PROBLEMS	
The Liquid Crystal Display (LCD) shows question marks (????).	▪ Turn the unit power "OFF" and "ON" ▪ Erase the memory chip (EEPROM) using Function Code 50. If you have trouble going to the programming mode, press the square red button and press "#" (you may still see the questions marks on the display, ignore it) and enter Function code 50 follow by "#" and press **Function Code 50 will erase the whole database.**
The Liquid Crystal Display (LCD) is blank, no display at all.	▪ The power LED must be "ON" (LED2 marked on the board). ▪ The Power Switch's toggle must be on the left ▪ Check the fuse (3 Amp 250 Volt) ▪ Measure the voltage on AC1 and AC2 (set your voltmeter to AC and put the probes on AC1 and AC2), it should read within 12VAC-13.8VAC. ▪ The LCD's ribbon cable has red dots along the side. The red dots must be facing up. It must be connected to the terminal marked CN5 on the board. ▪ The LCD's ribbon cable sits tight on the pins terminal marked CN5 on the board. ▪ The LCD's ribbon cable is connected into the LCD's terminal pin connector and the red dots along the side of the ribbon should be on the left side. ▪ Adjust the LCD's intensity, see figure 2. ▪ Turn the system's power "OFF", wait for 15 seconds and turn it "ON". ▪ If the sunlight hits directly into the system's the LCD, block the sunlight. If the LCD is readable after you block the sunlight, you may have to install the system onto different location or you can purchase the 7SHLD (sun sunshield). **Note**: the sunshield may not solve your problem if the sunlight hits horizontally into the LCD display. Direct sunlight may collect heat into the system and it may damage the system if the inside

	• temperature reaches above 140 °F. • If the display only fails when the outside temperature is below 32°F or 0°C, you may need to install a heater (AHP-5).
The LCD shows eight squares or underlines.	• The LCD's ribbon cable has red dots along the side. The red dots must be facing up. It must be connected to the terminal marked CN5 on the board. • The LCD's ribbon cable sits tight on the terminal pins marked CN5 on the board. • The LCD's ribbon cable is connected into the LCD's terminal pin connector and the red dots along the side of the ribbon should be on the left side. • Turn the system's power "OFF", wait for 15 seconds and turn it "ON". • The input voltage to AC1 and AC2 should read within 12VAC-13.8VAC. • If the display only fails when the outside temperature is very cold (wintertime), you may need to install a heater (AHP-5).
COMMUNICATION PROBLEMS	
The visitor can't place a call to a tenant or tenants.	• Check to see if the problem occurs on all tenants. • Disconnect the phone line from the AeGIS system and connect a standard phone into the phone line and try to place a call. • Check the phone number on the system programming. • Check the phone line and make sure the telephone terminal box is grounded.
The visitor hears a radio station on the AeGIS system while talking to a tenant.	• Check to see if the problem occurs on all tenants. • Disconnect the phone line from the AeGIS system and connect a standard phone into the phone line and try to place a call. • Check the grounding on the AeGIS system and telephone line. The Aegis's cabinet must be grounded to an earth ground. The telephone line shield must be grounded at the telephone terminal block, not on the AeGIS cabinet. • Disconnect the ground wire (marked GND on the board at 5 pins terminal) from the board. If the problem still exists, install a Modular RFI Filter.
Both the visitor and tenant hear static while they are talking.	• Check to see if the problem occurs on all tenants. • Disconnect the phone line from the AeGIS system and connect a standard phone into the phone line and try to place a call.
The sound keeps going out while the tenant and visitor are talking.	• The AeGIS 8000 does not have full-duplex speakerphone. If the AeGIS is installed in a noisy environment, you may experience with this problem. • Both the visitor and tenant can't talk simultaneously. • Try to speak a little further from the system.

GATE PROBLEMS	

The gate or door does not open when the tenant presses number "9" or "8" or any number programmed on open door1 and door 2.	• Make sure there is power on the gate or door strike.
	• Check for loose connection on gate or door strike wires on RC1 and NO1 (if you use "Normally Open" gate or door strike) or RC1 and NC1 (if you use "Normally Close" gate or door strike) on the AeGIS system.
	• Remove the two wires on RC1 and NO1 and short the two wires, the door or gate should open or remove the two wires on RC1 and NC1, the gate or door should open. If the door or gate does not open, you may have a problem with the gate or door strike.
	• Test the relay and follow the steps below:
	  1. Set your multi-meter to Ohm (touch the two probes, the meter will read about 0 (zero value)
	  2. Connect the meter's probes to RC1 and NO1 (if "Normally Open" strike is used, the meter will read as an open circuit) **or** RC1 and NC1 (if "Normally Close" strike is used your meter will read about 0 value).
	  3. Place a call from the system to one of the tenants and tell the tenant to press "9" and you should get the following results:
	    ▪ Your meter should read to about 0 value if RC1 and NO1 contacts are used, otherwise the system's relay is bad.
	    ▪ Your meter should read as an open-circuit if RC1 and NC1contacts are used, otherwise the system's relay is bad.
	    ▪ If use relay 1 make sure the gate strike is connected to relay 1, if you use relay 2 make sure the gate strike is connected to relay 2 (see figure 2).
	    ▪ The open door number you have programmed to open door 1 and door 2 are the number you are using to open the gate or door from the tenant's phone.
	    ▪ Make sure the tenant's phone is not in pulse dialing.

The gate or door does not open when the tenant presses number "9" or "8" or any number programmed on open door 1 and door 2, but it opens using a personal access code.	• Try to call a few different tenants. If the problem precists, erase the system's memory to default (use function code 50). This function will erase whole database.
KEYPAD PROBLEMS	
All or some of the keypad's keys do not work.	• The keypad's ribbon cable has red dots along the side, the red dots must be facing upward or toward the terminal connectors. It connects to terminal marked CN1 on the board. • Turn the power "OFF" and disconnect the keypad's ribbon cable from the board and reconnect it and turn the power "ON". • Press the square red button switch on the board, and system will display the master code,

	then press 0-9 key on the keypad and every single key pressed will show on the display. **NOTE:** Do not press the "#" or "∗", doing so will delete or replace your current Master Code.

AeGIS 8000 Series Management Software

System Requirements

♦ 486DX or Higher CPU Speed
♦ 16 MB RAM Minimum
♦ 250 MB Hard-Drive Minimum.
♦ Windows'95 or '98 Operating Systems
♦ Windows'95 or '98 Compatible Modem 1200 BPS or Faster.

> **NOTE:** The Management Software may not be compatible with some modems.

Software Installation

Step 1   Insert the Pach & Company CD-ROM.
Step 2   Open My Computer.
Step 3   Open the CD-ROM file and double click on Setup. Follow the instruction to continue the installation.

Modem Setting

Step 1   You must enable the function codes below locally.
 ▪ Enable Auto answer (function code 74 must be set to "1") on your AeGIS 8000.
 ▪ Enable Modem Programming (function code 71 must be set to "1" and select the protocol on function code 70: "0" for BELL212 and "1" for V22.
 ▪ Change the Directory Digits (function code 09).
Step 2   Click on setting, see figure 4.
Step 3   Enter one of the dialing strings below:
 AT&F S37=5S9 or
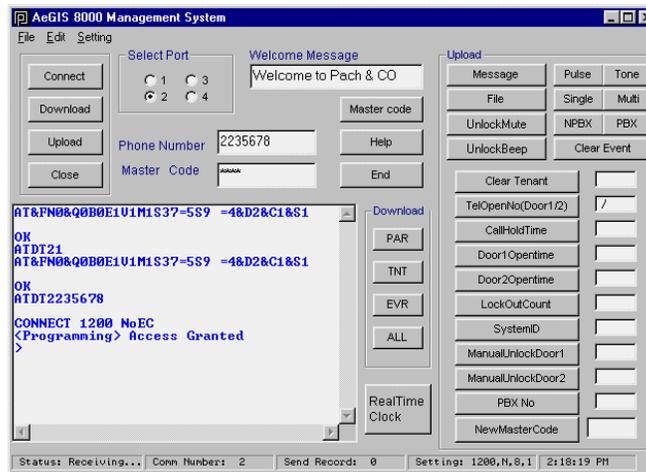 **AT&FN0&Q0B0E1V1M1S37=5S9=4&D2&C1&S1**

Figure 4

Step 4   Set the byte cycle to 15 ms.
Step 5   Select port number.

Modem Connection

Step 1   Click on Connect button and you should see connect 1200 on Received Content box.
Step 2   Enter the valid Master Code and click on Master Code button, and you will see access granted. If you see illegal command message, click Master Code button again.

Creating Tenant Database

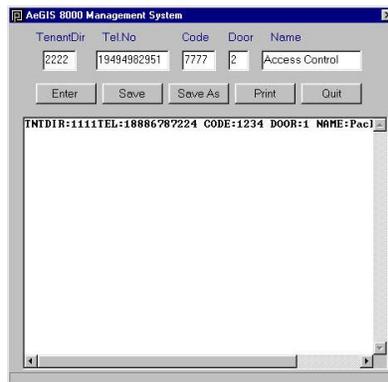**Step 1**   Click on File menu and click on New Tenant Database, you will see figure 5.

Figure 5

Step 2   Enter the tenant directory. The tenant directory number of digit must match with the directory digit on the AeGIS 8000.
Step 3   Enter the tenant telephone number up to 11 digits.
Step 4   Enter the 4-digit access code number. You may leave this field blank, if access code is not needed.
Step 5   Enter Door 1 for relay 1, door 2 for relay 2 and door 3 for both relay 1 and 2.
Step 6   Click on enter and the tenant data will show on the box as shown on figure 5.
Step 7   Click on Save as if this is the first time you save the database or Save if you have already saved the database before.
Step 8   Click on Print if you want to print the database.
Step 9   Click on Quit, to quit.

Upload

A connection must be established between the software and the AeGIS 8000. The connection will be terminated in 120 seconds if in idle mode.

Step 1   Click on Upload button, the all of the buttons under the upload frame will be activated.
Step 2   Click on File and select the database file.
Step 3   If you want to upload another parameters click on the associate buttons under the upload frame.

Download

A connection must be established between the software and the AeGIS800. The connection will be terminated in 120 seconds if the system is idled.

Step 1   Click on Download.
Step 2   Click on the associate button under the download frame.

Refer to the owner's manual for the system operation in more detail.

Event Recording

Click on the "EVR" button to download the "Event Recording". You can download the event recording daily, weekly, monthly or annually. It is recommended to download the event-recording daily because if the system's buffer is full, the "old" events will be replaced with the most current ones. You can clear or delete the Event Recording by clicking the "CLR EVR" button. If you do not clear the event-recording buffer, the next time you download the event recording data, you will be downloading "old" events along with the current ones. The table below describes the Event Recording. Follow the table below to translate your Event Recording report. The most current Event Recording will show first on the report.

****Events Report****					
DATE	TIME	SOURCE	CODE	ACTION/CAUSE	DESCRIPTION
03/31 1999	15:21	System Keypad	6666	Denied, Bad Code	Access code denied
03/31 1999	15:20	System Keypad	8888	Denied, Bad Code	Access code denied
03/31 1999	15:16	System Keypad	5555	Denied, Bad Code	Access code denied
03/31 1999	15:15	System Keypad	3333	Access Granted	Access Granted
03/31 1999	15:14	System Keypad	2222	Access Granted	Access Granted
03/31 1999	15:14	System Keypad	1111	Access Granted	Access Granted
03/31 1999	14:59	Door 2	0000	Manager Locked	Manual locked Door 2
03/31 1999	14:59	Door 1	0000	Manager Locked	Manual locked Door
03/31 1999	12:39	Door 2	0000	Manager Unlocked	Manual Unlocked door 2
03/31 1999	12:38	Door 1	0000	Manager Unlocked	Manual Unlocked door 1
03/31 1999	12:37	Postal Unlock	0000	Access Granted	Access Code granted by Postal Lock
03/31 1999	12:37	Visitor Phone	3333	Access Granted	Access granted by the tenant with directory 3333
03/31 1999	11:52	Visitor Phone	2222	Access Granted	Access granted by the tenant with directory 2222