

AeGIS 2500NC Series

Installation and Operation Manual



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Pach & Company
www.pach-co.com

941 Calle Negocio
San Clemente, CA 92673

Phone: 1-888-678-7224
Fax: 949-498-6879

Pach and Company thanks and congratulates you on the purchase of your AeGIS 2500NC Series (2512NC, 2524NC, 2536NC or 2548NC) No Phone Bill Telephone Access Control Systems. Read this manual carefully before starting the installation.

Limitations of Liability

This manual is subject to change without notice.

Pach and Company is not liable for any errors that might occur from use of this document, nor is any commitment to update the information herein implied.

Pach and Company does not assume any liability for any damages, which may arise in installation or use of the AeGIS 2500NC Series. Pach and Company does not assume liability for any incompatibility between the AeGIS 2500NC Series and users devices.

Pach and Company reserves the right to make changes without prior notice to any products in order to improve reliability, function or design.

Product Specifications

The AeGIS 2500NC Series (2512NC, 2524NC, 2536NC or 2548NC) consist of Main Lobby Control Panel (AeGIS 2500NC) and Main Relay Cabinet of 12, 24, 36 or 48 tenants. The Main Relay Cabinet can be interfaced with a maximum of eight AeGIS 2500NC. If your application requires more than 48 tenants, contact Pach and Company technical department at 1-888-678-7224 between 7:30 AM - 4:30 PM PST.

Power Input: 12 VAC/DC 20VA UL Listed Transformer (12 VAC supplied by PAch & Company).

Current Consumption: 38 mA Idle, 385 mA operating.

Emergency Battery: Built-in charging circuit for 12 VDC 4 Ahr rechargeable battery (battery not supplied).

Operating Environment: 0°F to 140°F or -18°C to 60°C. Relative Humidity 0 % - 95 % noncondensing.

Relay: Single relay. Form C Dry Contact 120 VAC 10A, 24VDC 10A or 250VAC 7A. (provide Normally open and Closed contact).

Dialing: Touch-tone. Tenant must have touch tone phone.

Built-in Distinctive Ringing and Call Waiting.

Programming: No programming necessary.

Directory: Paper with clear Lexan window.

Construction: 16 Gauge Cold Rolled Steel with brushed stainless steel face plate.

Dimension Surface or Semi-flush (HWD) :

10-13/16 " x 8-5/8 " x 3-3/4 " or 27.5 Cm x 21.9 Cm x 9.5 Cm.

Dimension Full-flush (HWD):

10-7/8" x 8-7/16" x 2-5/16 or 27.6 Cm x 21.4 Cm x 13.5 Cm (faceplate).

10-3/8" x 8-1/8" x 2-3/16" or 26.4 Cm x 20.6 Cm x 5.6 Cm (cabinet).

Mount: Surface, Full-flush and Semi-flush. Outdoor or Indoor.

Shipping Weight: 11 Lbs or 5.0 Kg. approximate.

Product Accessories

2500NC: Extra Main Lobby Control Panel

ASP1: AC and Telephone Surge Protector.

APM1: AeGIS Pedestal Mounting Post.

AP25: Adapter Plate for APM1.

AVP25: AeGIS Black and White Video Package.

AVP25C: AeGIS Color Video Package.

25XMFR: 12 VAC 40 Transformer.

NLK25: Night Light Kit.

SFM25: Brushed Stainless Steel Semi-flush Mounting Ring.

SFM25N: Brushed Stainless Steel Semi-flush Mounting Ring to be used with system and night light kit.

FM7SS: Brushed Stainless Steel Full-flush Mounting Ring.

Unpacking the System

Check the serial number on the printed circuit board, cabinet and warranty card, they must match. If they **DO NOT MATCH**, contact Pach and Company Technical Department toll free number at 1-888-678-7224. All the items listed below come with the AeGIS 2500NC Series.

- AeGIS 2500NC and Relay Cabinet of 12, 24, 36 or 48 tenants (AeGIS 2512NC, 2524NC, 2536NC or 2548NC).
- Two of 25XMFR (12 VAC 40VA Power Transformer).
- 5-pin terminal connector inside the AeGIS 2500NC cabinet.
- Two of 3-pin terminal connector inside the AeGIS 2500NC cabinet.
- Two pair of keys (a pair for AeGIS 2500NC and a pair for the relay cabinet).
- RJ-11 adapter inside the AeGIS 2500NC cabinet.
- RJ71C12 or RJ71C24 or combination of two (quantity is varied depending on the number of tenant).
- 50-pin Telephone Station Connector Cable, quantity is varied depending on the number of tenant. Each cable represents 12 tenants.

Unpacking the System

The AeGIS 2500NC Series comes with two (2) years warranty parts and labor. We will include lightning strikes in our two years warranty if surge protection is installed with the systems. 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 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.

Installation Requirements

A proper installation of the AeGIS 2500NC Series is very essential. You MUST follow the installation procedures as specified in this section. Follow the wiring diagram as shown on figure 1.0.

The AeGIS 2500NC Series consist of Main Lobby Control Panel (AeGIS 2500NC) and Main Relay Cabinet as shown on figure 1.0. **The AeGIS 2500NC can be installed indoor or outdoor. The Main Relay Cabinet must be installed indoor.**

- 1 Communication Wiring Requirements between the AeGIS 2500NC and Main Relay Cabinet:**
 - Two conductors, 18-gauge (minimum), stranded shielded MUST be used. Ground one end of the shield to a telephone ground block and leave the other end open as shown on diagram on figure 1.0.
 - A maximum of eight AeGIS 2500NC can be interfaced with the Main Relay Cabinet.
- 2 Paper Directory Night-light is manufacturer prewired.**
- 3 Main Lobby Control Panel (AeGIS 2500NC) Grounding**

Ground the Main Lobby Control Panel to an earth ground using one conductor, 18-gauge (minimum), solid.
- 4 Door Strike Wiring**

The AeGIS 2500NC provides Form C dry contact Normally Open and Closed (120 VAC 10A, 24VDC 10A or 250VAC 7A). See the door strike manual to determine if the door strike is normally open or closed and wiring requirements.
- 5 Main Relay Cabinet Grounding**

Ground the cabinet to a Telephone Ground Block using one conductor, 18-gauge (minimum), solid.
- 6 Manager or Door Man Phone Wiring (Optional).**

Connect the Telephone Central Office line to MCO1 nad MCO2 using Category 5 twisted pair telephone wire.
- 7** Connect the Manager Phone to MTN1 and MTN2 using Category 5 twisted pair telephone wire.
- 8 AeGIS 2500NC Power.**

Connect the 12 VAC 40 VA transformer to AC1 and AC2 using two conductors, 18-gauge (minimum), stranded.
- 9 AeGIS 2500NC Battery Backup (Optional).**

Connect the 12 VDC 4 Ahr battery + (plus) to BAT and - (minus) to COM using two conductors, 18-gauge (minimum), stranded.
- 10 Main Relay Cabinet**

Connect the 12 VAC 40 VA transformer to AC1 and AC2 using two conductors, 18-gauge (minimum), stranded.
- 11 Main Relay Cabinet Battery Backup (Optional).**

Connect the 12 VDC 4 Ahr battery + (plus) to BAT and - (minus) to COM using two conductors, 18-gauge (minimum), stranded.

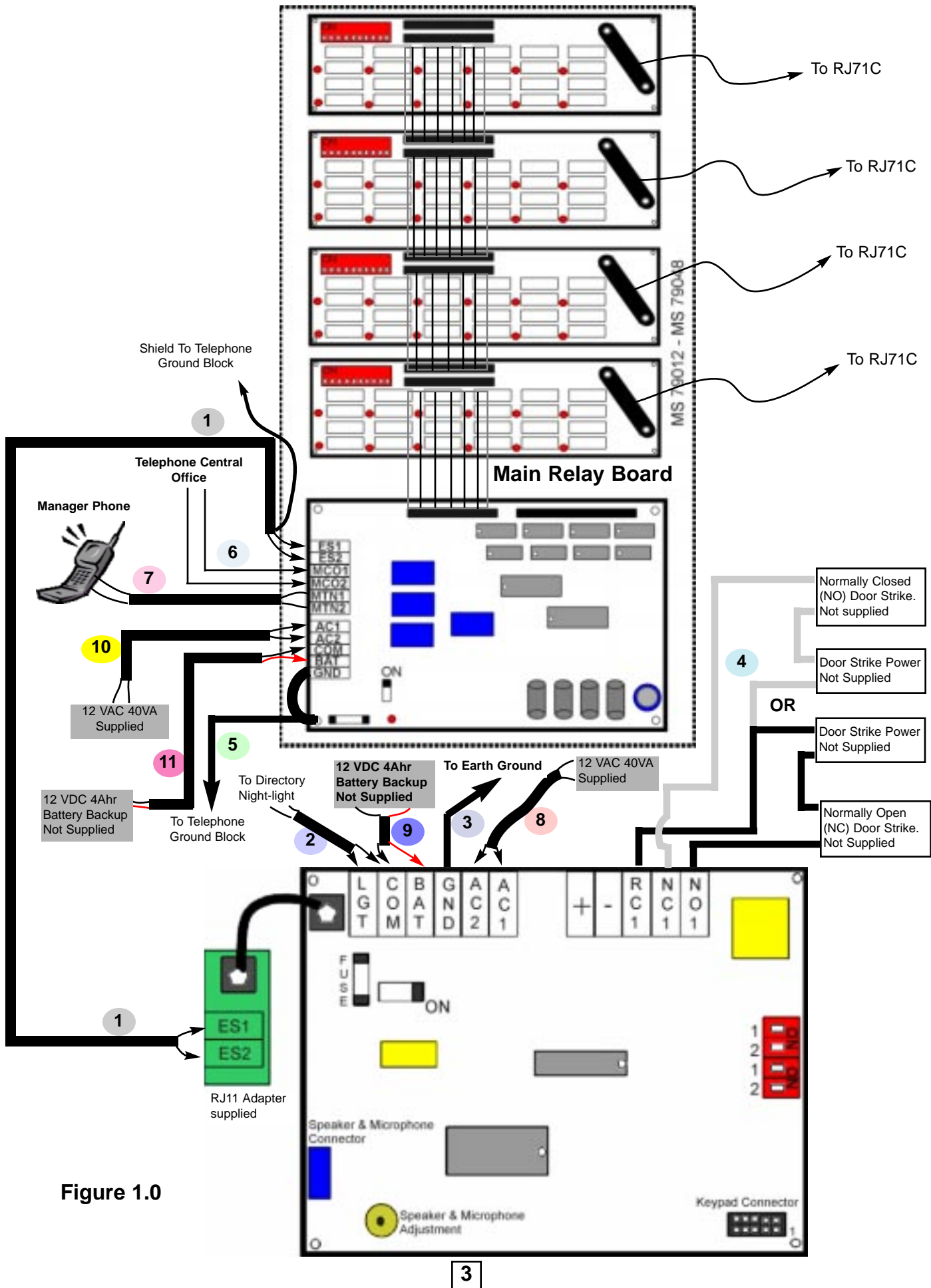
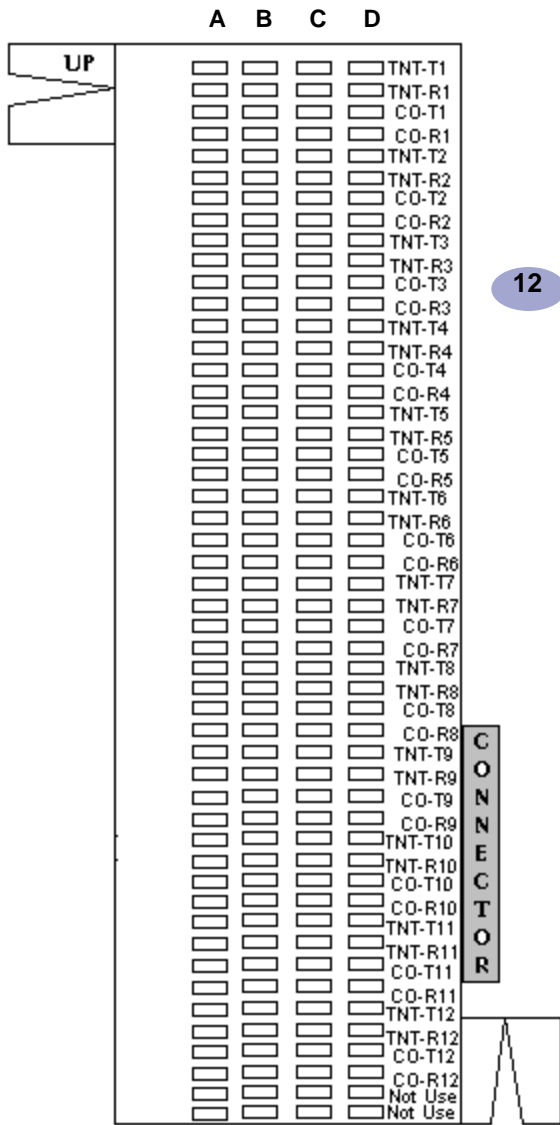
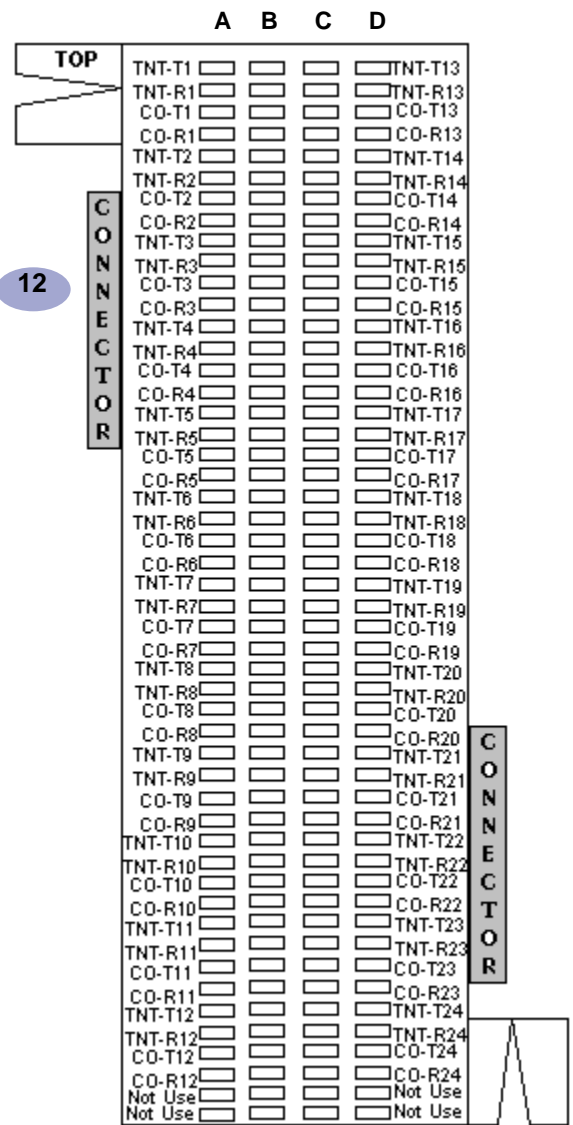


Figure 1.0



RJ71C12

Figure 2.0 A



RJ71C24

Figure 2.0 B

12

Connection to Tenant's Phone Line

- AeGIS 2512NC comes with RJ71C12.
- AeGIS 2524NC comes with RJ71C24
- AeGIS 2536NC comes with RJ71C24 and RJ71C12.
- AeGIS 2548NC come with two of RJ71C24.

RJ71C12: has 4-columns (A-D) and each column has 50 rows (pins) as shown above. Each row on column C and D is connected. DO NOT use column A and B (Figure 2.0 A).

RJ71C24: has 4-columns (A-D) and each column has 50 rows (pins) as shown above. Each row on column A and B is connected and each row on column C and D is connected (Figure 2.0 B).

Step 1: Identify Telephone Central Office wires on each tenant. **NOTE:** If tenant does not have active phone line you are still responsible to identify and connect tenant's Telephone Central Office wires.

Step 2: Connect each tenant Telephone Central Office wires to the RJ71C12 or RJ71C24 labeled CO-Tn and TNT-Rn (not polarity sensitive) as shown above. Where n: relay number or tenant number from 0001 to 0048.

Step 3: Connect each tenant Telephone Line to RJ71C12 or RJ71C24 labeled TNT-Tn and TNT-Rn (not polarity sensitive)

Where **n**: tenant number 0001 to 0048.

Step 4: Connect the 50 pins cable connector to the RJ71C12 or RJ71C24.

NOTE: Tenants cannot use their telephone until the Main Control Relay board(s) are connected to the RJ71C12 or RJ71C24.

Step 5: Test the system, see System's Operation.

System's Operations

The AeGIS 2500NC Series have a built-in paper directroy with night-light. The paper directory fits up to 48 tenant names. The paper directory is supplied by Pach and Company as shown on figure 3.0.

TENANT DIRECTORY					
Name	Dial	Name	Dial	Name	Dial
Pach and Company	0001		0017		0033
	0002		0018		0034
	0003		0019		0035
	0004		0020		0036
	0005		0021		0037
	0006		0022		0038
	0007		0023		0039
	0008		0024		0040
	0009	Access Control Systems	0025		0041
	0010		0026		0042
	0011		0027		0043
	0012		0028		0044
	0013		0029		0045
	0014		0030		0046
	0015		0031		0047
	0016		0032	Smith Corporation	0048

Figure 3.0

How to Use the Paper Directory

The sample of paper directory is shown on figure 3.0. The paper directory fits up to 48-tenant names. The **DIAL** numbers are associated with **Relay Numbers**. The **DIAL** numbers are **not changeable**. Each apartment or unit is assigned to a relay number (0001-0048). For example: Pach and Company is assigned to relay 0001 then the DIAL number is 0001, Access Control Systems is assigned to relay 0025 then the DIAL number is 0025 and Smith Corporation is assigned to relay 0048 then the DIAL number is 0048. It is the installer responsibility to assign each apartment or unit relay number during the installation.

Tenant names cannot be arranged in alphabetical order because the DIAL number is associated with the apartment or unit. If Smith Corporation moves out and Card Corporation moves in, then Card Corporation has a DIAL number 0048.

You are responsible to maintain and replace the paper directory for the proper use of the system.

How to use the Paper Directroy Night-Light and Call Tenant

Step 1: Press * (night-light will turn ON) and you will hear TWO BEEPS. If more than one AeGIS 2500NC Main Lobby Control Panel is interfaced with the Main Relay Cabinet and one 2500NC is in use, you will **NOT** hear TWO BEEPS if the * is pressed but the night-light will turn ON. **NOTE:** The night-light will turn OFF in 15 seconds if you do not continue to step 2.

Step 2: Press # then press the DIAL number associated with the tenant name and if you get:

- A ring back every couple seconds, indicate the system is calling the tenant. If the tenant does not answer the call, you will hear TWO LONG BEEPS ten seconds before the system hangs up (see Talk Time Setting).
- A fast beep indicates the tenants is busy.

How to Answer the AeGIS 2500NC Series Call and Open the Gate for Visitor.

Step 1: Answer the AeGIS call and initiate a conversation with your visitor. Both tenant and visitor will hear TWO LONG BEEPS before the system hangs up (talk time has expired). Tenant needs to press # to extend the the Talk Time for another cycle (see Talk Time).

Step2: Press 9 to open the gate and hang up or do not press 9 and hang up if you do not want to open the gate. **NOTE:** Tenant must have a touch tone phone.

How to to Use the Call Waiting Feature

The AeGIS 2500NC Series have a built in call-waiting feature. You can place an outside call or an AeGIS call on hold. The call waiting is being process by the Main Relay Cabinet.

To Place Outside Call on Hold

If you are in a conversation using an outside line, you will hear beeps if there is incoming call from the AeGIS. You must do one of the following:

- Ignore the incoming call from the AeGIS, but you will hear beeps until the visitor hangs up the call or the system's timer is expired
- Press "0" to put the outside call on hold and you will be switched to the AeGIS call. Press "9" to allow remote access to the visitor and you will be automatically switched to the outside call or press "0" to switch to the outside call without allowing access to the visitor.

To Place AeGIS call on hold

If you are in conversation with visitor on the AeGIS, you will hear beeps if there is incoming outside call. You must do one of the following:

- Ignore the incoming outside call, you will hear beeps until the caller hangs up
- Press "9" to allow access to the visitor and your call will be automatically switched to the incoming outside call
- Press "0" to switch to the outside call.

How to Use Optional Doorman or Manager Phone

An optional doorman or manager phone can be connected to the AeGIS, but you must have an active telephone line connected to Mco1 and Mco2. The doorman or manager can call to the tenants without using the outside line, therefore no local calls fee involved. See figure 1.0 for doorman or manager phone wiring diagram.

- To place a call to the tenant, press "#" and the tenant **DIAL** number listed on the directory.
- To place an outside call, press "0" and wait for a dial tone and dial the number (the actual phone number).

Talk Time

The AeGIS 2500NC Series Talk Time is set using a DIP SWITCH (DIP1) see figure 1.0. The switch setting is shown below.

DIP 1		Talk Time
1	2	
OFF	OFF	30 Seconds
OFF	ON	60 Seconds
ON	OFF	100 Seconds
ON	ON	150 Seconds

The Talk Time is the conversation time between a visitor and tenant. The Talk Time timer starts as soon as a visitor dial the tenant. Ten seconds before the Talk Time expires, both visitor and tenant will hear TWO LONG BEEPS. **PRESS # AFTER THE 10 SECONDS WARNING BEEP TO EXTEND THE TALK TIME FOR ANOTHER CYCLES.**

Door Open Time

The system relay can be programmed to open the door using the DIP SWITCH (DIP2) as shown on figure 1.0. The switch setting is shown below.

DIP 2		Door Open Time
1	2	
OFF	OFF	4 Seconds
OFF	ON	12 Seconds
ON	OFF	20 Seconds
ON	ON	60 Seconds

If your door requires less than 4 seconds open time, an isolation relay with built-in timer must be installed.

Speaker and Microphone Volume Adjustment

The speaker volume and microphone are factory preset. See figure 1.0 to locate the speaker volume adjustment pot.

- CLOCKWISE** to decrease the volume.
- COUNTER-CLOCKWISE** to increase the volume

If you hear "feedback" when you closed the AeGIS 2500NC Series cabinet, decrease the speaker volume.

Relay Addressing

The Main Relay Board addressing is factory preset as shown below.

Relay #	Switch										Tenant Number
	1	2	3	4	5	6	7	8	9	10	
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0001 - 0012
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0013 - 0024
3	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0025 - 0036
4	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	0037 - 0048

Trouble Shooting Guide

No Beep when keypad is pressed.

- Check the power transformer connections.
- Check the power switch inside the unit, it must be On.
- Check the fuse.
- Check the keypad connection. Red line must be on the right.
- Check the speaker and microphone connection.

System does not call the tenant phone.

- Check the power transformer connections on the AeGIS 2500NC and the Main Relay Cabinet.
- Check the power switch on both systems.
- Check the communication wires between the AeGIS 2500NC and the Main Relay Cabinet.
- Check the connections between the Telephone Central Office and tenant phone on Main Relay Cabinet RJ71C.
- Disconnect the AeGIS 2500NC communication wires and connect a test phone to ES1 and ES2 on the Main Relay Cabinet then call the tenant by pressing #Dial Number (i.e 0001).

The tenant can hear the visitor but the visitor can't hear the tenant.

- Check the speaker and microphone wires and connector.
- Call Pach & Company for trouble-shooting help.

The tenant can't hear the visitor but the visitor can hear the tenant.

- Check the speaker and microphone wires and connector.
- Call Pach & Company for trouble-shooting help.

Door or Gate does not open when number 9 is pressed.

- Touch-tone phone must be used.
- Check the door or gate strike connections and functionality.
- Call Pach & Company for trouble-shooting help.

Call waiting features does not work.

- Touch-tone must be used.
- 0 key is used to transfer call.