

NEOS3000A GSM Least Cost Wireless Router



Operating Manual.

Introduction

Thank you for purchasing the **NEOS3000A** product from **Aristel Networks** Australia. The **NEOS3000A** allows you to take advantage of “mobile to mobile” cheaper rates when using your “land-line” telephone or telephone system. The **NEOS3000A** can distinguish between your calls to mobile numbers and your calls to land-line numbers. It will then use the least cost network for the call.

You can reprogram the system at any time should you:

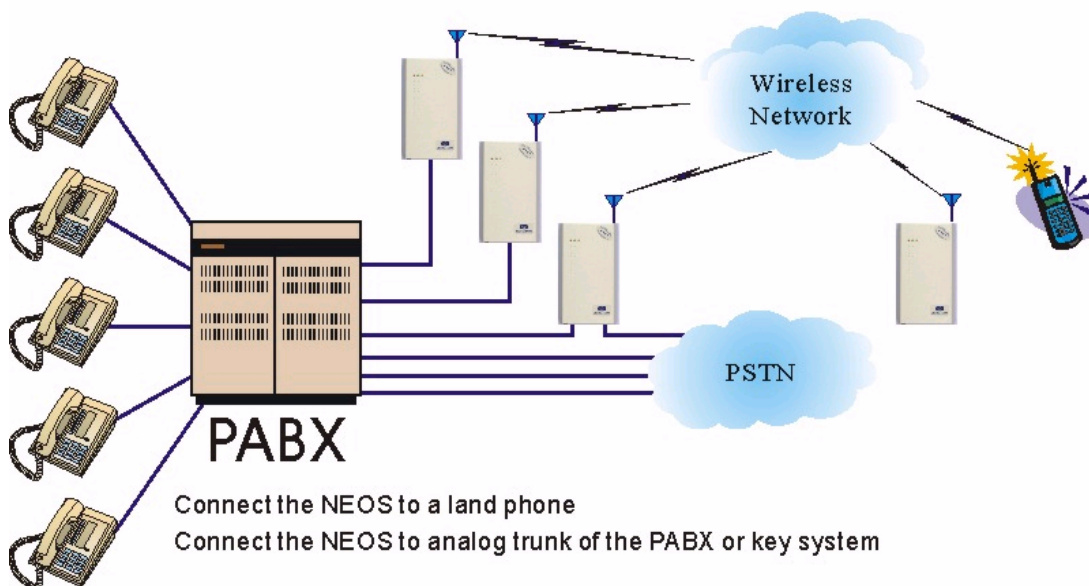
1. Change your mobile contract
2. Need more mobile phones
3. Change any of your mobile numbers
4. Or any other reason

No expensive Technician “service visit” is required for programming. You can do it yourself very simply.

Parts List

DESCRIPTION	QUANTITY REQUIRED	STANDARD (INCLUDED)	OPTIONAL (NOT INCLUDED)
NEOS3000A	1	YES	
DC 12V/1A ADAPTER	1	YES	
PHONE CORD	1	YES	
PHONE SOCKET	1	YES	
MALE SMA ANTENNA	1	YES	
OPERATING MANUAL	1	YES	
DISPLAY	1		YES
DATA CABLE	1		YES
SCM50	1		YES

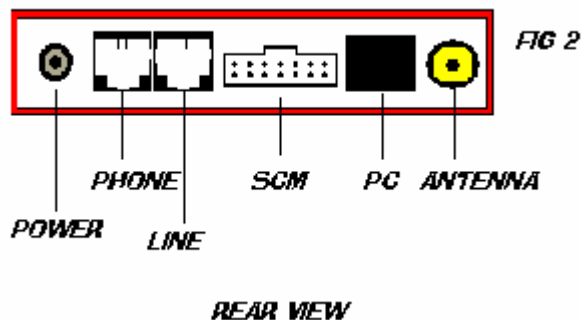
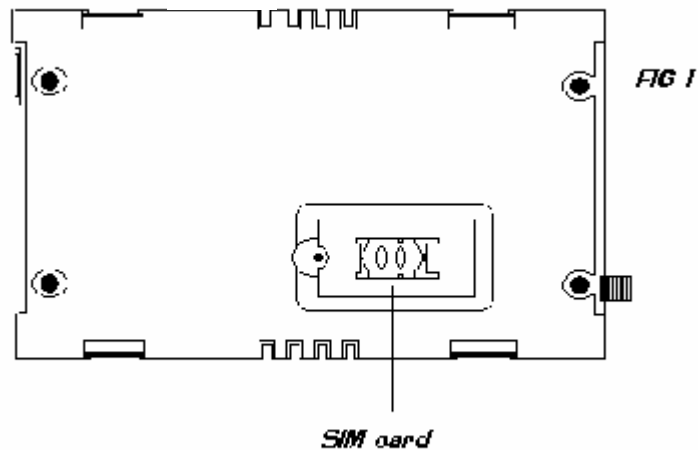
Trunk Side Application



Installation

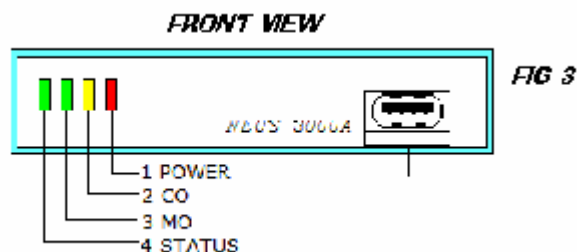
1. **SIM card installation (Fig 1)**
 - 1.1 Remove the 12V adaptor from the NEOS3000A
 - 1.2 Remove the SIM card cover from the bottom of the unit
 - 1.3 Slide the SIM card holder towards the front of the unit
 - 1.4 Lift up the holder
 - 1.5 Insert the SIM card (Note orientation of notched corner)
 - 1.6 Replace holder and slide towards the rear of the unit to lock in place
 - 1.7 Replace cover and power adaptor
2. **Connecting the Antenna (Fig 2)**
 - 2.1 Screw on the antenna cord to the connector on the front of the unit
 - 2.2 Place antenna away from electrical/electronic systems (computers, microwave ovens, etc)
3. **Connecting the Telephone line and Telephone system (Fig 2)**
 - 3.1 If connecting to a phone line, plug the line into the connector marked LINE. Plug your telephone into the connector marked PHONE. Go to step 3.3
 - 3.2 If connecting to a phone system, plug the PBX CO line connection into the connector marked PHONE.
 - 3.3 Connect the power adaptor into the connector marked PWR
 - 3.4 The red POWER indicator should be on.

Bottom view



LED status indicators (FIG 3)

LED Position	LED colour	LED Activity	Description
1	RED	ON OR OFF	DC POWER IS ON OR OFF
2	YELLOW	ON	PSTN LAND LINE IS IDLE
2	YELLOW	OFF	PSTN LANDLINE IS DISCONNECTED
2	YELLOW	CONTINUOUS FLICKER	PSTN LAND LINE IS BUSY/TALKING
3	GREEN	ON	THE MOBILE (GSM) LINE IS IDLE
3	GREEN	FLASH	THE MOBILE (GSM) LINE IS BUSY/TALKING
3	GREEN	OFF	NO SIM CARD
4	GREEN	ON	GSM LINE IS BUSY
4	GREEN	FLASH	NO SIM CARD OR NETWORK SEARCHING
4	GREEN	CONTINUOUS FLICKER	IN SERVICE
4	GREEN	OFF	GSM POWER OFF
2&3	GREEN & YELLOW	FLASH 3 PER SECOND	SET-UP MODE
2&3	GREEN & YELLOW	FLASH ¼ SEC ON & ¾ SEC OFF	PROGRAMMING MODE



Using the NEOS3000A

Stand-alone (no Telephone System)

- Programme the codes to be sent to Mobile network
- Lift off the handset
- Listen for dial tone. (Check system connections if no dial tone is heard)
- Dial the desired number

Connected as an exchange line on a Telephone System

- Select the exchange line connected to the NEOS3000A (Manual or Auto LCR)
- Listen for dial tone. (Check system connections if no dial tone is heard)
- Dial the desired number
- NOTE! If using a system, the NEOS3000A can be left in the default condition. No programming is required**

Entering programming mode

Plug a telephone (SLT) into the "PHONE" socket and unplug the "LINE" connection
Lift off handset. You will hear continuous dial tone

Dial * * * * #. You will hear "Beep, Beep, Beep" repeated continuously.

The green and yellow LEDs flash. You have 10 seconds to enter the password.

Enter the password (default = 1234#)

You will hear a "Der" tone (this is "set-up" tone) repeated every 2 seconds.

The green and the yellow LEDs will slow flash.

System programming can now be commenced. See chart below.

If a feature is correctly programmed, the green and the yellow LEDs will flash once and a Beep tone will be heard. If the input was incorrect, the green and the yellow LEDs will flash three times and three Beep tones will be heard.

If you make an incorrect entry, hang up for less than 2 sec. to return to set-up mode

To end programming, hang-up for more than 2 sec. or press * * 0 0 #

Programming Features and Programming method

1. **Outgoing timer control**

- 1.1 The system will give a 3 beep warning 25 seconds before the timer has been reached. This is a warning that the call may be about to be disconnected.
- 1.2 Press: 9 0 x where x is the time in minutes that an outgoing call is limited to.
- 1.3 Press 9 1 1 to disable the auto outgoing call disconnection when the timer has expired
- 1.4 Press 9 1 2 to allow the auto outgoing call disconnection when the timer has expired
- 1.5 Press 9 0 0 to disable the timer function for outgoing calls

2. **Call Restriction**

- 2.1 Press 9 1 5 to enable trunk selection (mobile or land-line)
- 2.2 Press 9 1 6 to disable trunk selection (mobile or land-line)

NOTE 1. SELECTIVE ROUTING VIA THE MOBILE LINK IS ONLY POSSIBLE IF CALL RESTRICTION IS ENABLED.

NOTE 2. IF RESTRICTION IS ENABLED, YOU MUST ENTER ALLOWED CODES OR NO CALLS ARE POSSIBLE.

3. **Allowed Dialling Codes**

- 3.1 Press 8 x x x x x x x x x # **OR** (version EA or later) 80 x x x x x x x x x # to add a code or prefix.
Up to 50 codes/prefixes can be entered.
Each code/prefix can be 9 digits max.
- 3.2 Press 7 x x x x x x x x x # **OR** (version EA or later) 70 x x x x x x x x x # to delete the code or prefix
- 3.3 Press 9 9 8 to clear all codes/prefixes

4. **Outgoing Tone**

- 4.1 Press 9 2 7 to disable beeping tones for GSM network calls
- 4.2 Press 9 2 8 to enable beeping tones for GSM network calls

5. **Polarity Reversal**

- 5.1 Polarity reversal for outgoing calls. If the called party answers, the polarity to the phone will be reversed. If the called party hangs up, the polarity will return to normal polarity
- 5.2 Polarity reversal for incoming calls. When an incoming call is answered, the polarity will be reversed. If the calling party hangs up, the polarity will return to normal polarity
- 5.3 Polarity options:
 - 5.3.1 Press 9 6 3 to disable outgoing polarity reversal
 - 5.3.2 Press 9 6 4 to enable outgoing polarity reversal
 - 5.3.3 Press 9 6 7 to disable incoming polarity reversal
 - 5.3.4 Press 9 6 8 to enable incoming polarity reversal

6. Factory Default Settings

Press 9 9 9 to reset the unit back to Factory Default Settings

Feature	Function Code	Feature Description
Set-up Mode	* * * * #	Enter Set-up Mode
	* * 0 0 #	Escape from Set-up Mode
Password	0 x x x x #	Set Password (can be up to 8 digits). The default is 1 2 3 4 #
	913	Disable password function
	914	Enable password function
Outgoing Timer control	900	Disable Timer function
	90x	Set outgoing timer (1~9 mins)
	911	Warning tone if time reached
	912	Disconnect call if time reached
Call Restriction	915	Enable trunk selection (mobile or land-line)
	916	Disable trunk selection (mobile or land-line)
Call Waiting	917	Enable NEOS call waiting
	918	Disable NEOS call waiting
Allowed Call Number Code i.e. GSM (Mobile) 50 code/prefixes max NOTE! SEE BELOW FOR VERSION CHANGE	8 or 80 x x x x x x x x #	Set an allowed code/prefix. (9 digits each, 50 codes max)
	7 or 70 x x x x x x x x #	Delete a code/prefix
	998	Clear all allowed codes/prefixes
GSM Warning Tone on Outgoing calls	927	Disable Warning Tone
	928	Enable Warning Tone
Send Caller ID	937	Stop Caller ID
	938	Allow Caller ID
Polarity Reversal on active Calls	963	Disable reversal on answer for outgoing calls (default)
	964	Enable reversal on answer for outgoing calls
	967	Disable reversal on answer for incoming calls (default)
	968	Enable reversal on answer for incoming calls
Receive volume level	53x	X is 0 to 4 default=4 (high)
Microphone volume level	60x	X is 0 to 4 default=2 (med)
Reset	999	Sets the System to Default values
Default Settings		Password = 1234 No Limit on Outgoing Calls All Calls Allowed

**NEOS3000A VERSION EA (MARCH 2005) OR LATER MUST INSERT 0 AFTER THE 8 OR 7.
IE:- VERSIONS EARLIER THAN EA = 8 x x x x x x x x x # AND 7 x x x x x x x x x #
VERSION EA OR LATER = 80 x x x x x x x x x # AND 70 x x x x x x x x x #**

FREQUENTLY ASKED QUESTIONS

FAQ 1. The Power light does not come on after power up.

Action. Check the power adapter and power cord/socket for correct operation

FAQ 2. How do I check the LED status?

Action. Check figure 3 on page 4

FAQ 3. When I pick up the phone I cannot hear dial tone.

Action. Check that the phone is OK and operating correctly

Check that the phone line (cord) is connected

Check the pattern of the LED lights for more information in figure 3

FAQ 4. When I pick up the phone I hear music

Action. The SIM is not registered to the network

The SIM is not operating correctly. Plug it into a mobile phone and check for operation

FAQ 5. I cannot hear the other party's voice

Action. Retry the call. It could be a network connection problem

The signal strength may be too low for proper transmission and reception. Relocate the antenna

FAQ 6. When I dial the mobile number, there is no answer

Action. Mobile network is still searching for mobile phone

Check that line and antenna are connected correctly

FAQ 7. I cannot dial via the PBX system

Action. Power off the NEOS unit. If you cannot make a call via the PBX, the connection to the PBX or the PBX may be faulty. Consult your local PBX dealer.

If you can make a PBX call with the NEOS powered off, consult your NEOS dealer

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