

# Instruction Manual

Please read this Instruction Manual carefully before installation and operation and keep it handy for reference at all times



## GSM Communicator - SIP 300

## Features

- 3 inputs for sensor or control panel connection with option to configure for GND connection, GND disconnection or changes in status.
- 2 control inputs for activation/deactivation with multiple configurations (GND connection, GND disconnection or changes in status).
- 2 TXT messages per each input.
- Allocation of three mobile numbers per input for TXT or call alerts.
- One service number for diagnostic TXT.
- Input alert in active or deactivate status (continuous monitoring irrespective of status).
- Input delay timer option.
- Compatible with any control panel
- 1 relay output (N/O) with multiple configuration options. Activation via TXT, call or triggering of inputs (with timer option).
- 2 additional high power outputs (optional)
- 1 LED collector output (switching with active/deactivate status)
- Automation capabilities through remote control outputs
- Custom naming facility of inputs, outputs and the device itself
- Programmable via simple TXT messaging
- Audio tapping (with volume control)
- Audio output
- Onboard clock (each TXT has an actual time display)
- Quad-band 850 – 900 – 1800 – 1900 MHz GSM network
- Status reporting of critical system parameters on demand or on pre set time and date
- Sleep mode for power saving or anti detection
- Security code for system protection. Alert warning facility for unauthorized excess
- Small in size – big in features

# Introduction

Thank you for choosing the GSM Communicator SIP 300 – the complete tool for your security, automation, and monitoring solutions. The GSM Communicator SIP 300 has been designed to provide a superior level and control of any personal or real property.

The GSM Communicator SIP 300 is an interactive communication/automation device offering a simple and flexible method of transmitting critical data via the GSM network. It is a monitoring device enabling to trigger commands via output ports and can be used as a separate alarm in virtually any application. The GSM Communicator is equipped with three input ports which can be connected to any sensor (PIR, smoke, fire, temperature, level control, contacts, etc), wireless receiver to extend the capabilities to include a host of wireless devices such as PIR sensor, medical pendant, panic button, perimeter beam etc and any control panel. On activation of those inputs a text message (TXT) or call is send to pre-programmed mobile phones. The GSM Communicator is also equipped with one relay output, one collector output and has the option to integrate two additional high-power relay outputs. These outputs can be triggered remotely via TXT or call as well as by the system itself depending custom configuration thus making the GSM Communicator an ideal tool for any automation application.

The unit is a complete alarm/monitoring/automation solution driven by one of the most commonly used commodity products of today, namely the mobile phone. The GSM communicator integrates hardwired alarm and monitoring technology with protected GSM communication and affords the ability to control any application via text message (TXT) or call, a form of communication that is fast, encrypted and familiar. The GSM communicator offers a complete duplex solution offering interactive report status and activity as well as accepting inbound command.

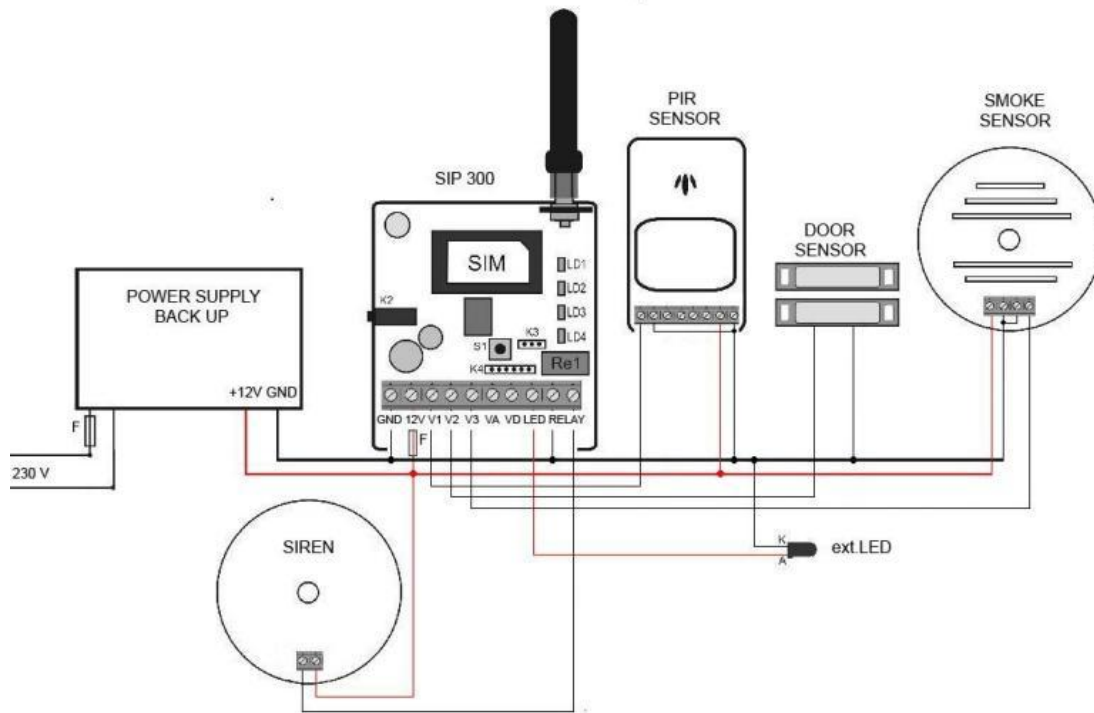
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# Electrical Diagram



## Terminals

- |            |   |
|------------|---|
| - GND      | Ground                                      |
| - +12V     | Supply voltage                              |
| - V1,V2,V3 | Input terminals                             |
| - VA, VD   | Control input terminals                     |
| - LED      | LED output terminal (status armed/disarmed) |
| - RELAY    | Output terminal (max load 30V/1A)           |

## Components (SIP 300)

- |                      |                                    |
|----------------------|------------------------------------|
| - LD1, LD2, LD3, LD4 | Status LED                         |
| - SIM                | SIM card holder                    |
| - K2                 | Audio jack                         |
| - Re1                | Relay                              |
| - K3                 | Connector not in use               |
| - K4                 | Connector for external power board |
| - S1                 | Service button                     |

## LED Status

Green LED 1 -Power-	Flashing slow (1sec. interval): <ul style="list-style-type: none"> <li>- System ready for operation, all ok.</li> </ul>
	Flashing fast: <ul style="list-style-type: none"> <li>- No GSM signal</li> </ul>
	Permanently on: <ul style="list-style-type: none"> <li>- Equipment out of service (e.g. after reset)</li> </ul>
	Pulse flashing (3x flash - pause): <ul style="list-style-type: none"> <li>- Preparing for sleeping mode</li> </ul>
	Pulse flashing (1 sec. rapid flashing): <ul style="list-style-type: none"> <li>- Unit receives TXT command</li> </ul>
Yellow LED 2 -Status-	Permanently on: <ul style="list-style-type: none"> <li>- System armed/active</li> </ul>
	Permanently off: <ul style="list-style-type: none"> <li>- System disarmed/not active</li> </ul>
	Continuous flashing (time period custom set): <ul style="list-style-type: none"> <li>- Delay timer when armed/activated. Example: Exit time when unit is used as a alarm system.</li> </ul>
Red LED 3 -Alarm-	Permanently on: <ul style="list-style-type: none"> <li>- Unit sending TXT or calling.</li> </ul>
	Flashing fast: <ul style="list-style-type: none"> <li>- Delay timer when system armed/active after input one is triggered.</li> </ul>
	Flashing slow (1sec. interval): <ul style="list-style-type: none"> <li>- Unit tries to TXT or call but the GSM signal is not sufficient.</li> </ul>
	Blitz flashing : <ul style="list-style-type: none"> <li>- Audio tapping</li> </ul>
	Pulse flashing (LED flashing rhythm of incoming ringing call): <ul style="list-style-type: none"> <li>- Any authorized incoming call.</li> </ul>
Orange LED 4 -Output 1-	Permanently on: <ul style="list-style-type: none"> <li>- Output port Relay 1 on.</li> </ul>
	Permanently off: <ul style="list-style-type: none"> <li>- Output port Relay 1 off.</li> </ul>

## Service Button Function

This function is for service personnel only!

- Pushed once - Arm or disarm the unit (without any delay timing)  
Hold button (approx. 3 sec) – All LED's start flashing.
- Continue holding the service button for another 5 sec – All LED's will switch to “permanently on” indication reset of factory settings with exception of stored mobile numbers as they are stored on SIM card.

## Specifications

Power supply voltage:	12V DC
Current consumption:	min 31mA – max 500mA (during GSM transmitting phase) sleep mode – 7mA
Operating bands:	GSM/GPRS 850 / 900 / 1800 / 1900 MHz
High frequency output:	2W @ 850/900MHz, 1W @ GSM 1800/1900MHz
Working temperature:	-20°C up to +50°C
Input active level:	GND
LED output:	max 4V/10mA
Microphone:	2.5mm connector K2
Audio input max level:	200mV
Audio output max level:	1V, max charge 1kΩ
On board Relay:	N/O max 30V / 1A
Dimensions:	80(W) x 55(D) x 20(H) mm
EMC:	EN 301489-01, EN 301489-07, EN 55022, EN 61000-6-2 EN61000-4-2A, EN61000-4-3A, EN61000-4A, EN61000-6A
Radiation:	EN 301511 V9.0.2
Safety compliance:	EN 60950-1, EN 60068-2-1+A1, EN 60068-2-2+A1

## Note:

Device is designed for indoor use only unless protected in appropriate enclosure.

The GSM Communicators are reliant on adequate GSM coverage. In the event of inadequate or no GSM coverage, Pacific GSM Limited can not be held liable for any damages or loss. If the GSM signal is not sufficient (below 40%), the use of an external aerial is recommended.

# Installation

The GSM Communicator SIP 300 is user friendly and easy to set up. The installation of the unit should be carried out by a professional person (i.e. electrician, alarm technician, auto electrician etc.).

To prevent electro static discharge, it is highly recommended to connect ground (GND) first when connecting the GSM Communicator with the power supply. Furthermore, it is recommended operating the unit with the 12Volt (11 – 14 V) backup power supply to insure operation if mains power is off.

- Connect the aerial to the SMA connector. If the GSM signal is not sufficient (below 40%), the use of an external aerial is recommended.
- Connect input device to the input terminal V1, V2, and/or V3.
- Connect output device to the output terminal (Relay – N/O) depending the custom configuration under SETP2 – position D.
- Place SIM card into SIM Card holder. Never insert or remove SIM card whilst the unit is switched on (power on) as SIM card or GSM module could be permanently damaged. Make sure that the SIM card is activated and has sufficient credit before usage. Please refer to your local GSM service provider for more information.

**Optional:** Connect remote control devices (RCX units to arm and disarm the communicator) to the control input terminals VA and VD depending the custom configuration under SETP2 – position E.

Connect external LED to the LED output terminal (indicating if the unit is armed or disarmed).

Note: The GSM Communicator has been tested and is approved with SIM cards provided by Vodafone NZ/AU.

# Configuration

After the GSM Communicator is connected to the power supply and switched on, the unit will undergo a self test cycle. During this modus, all LED's will be continuously on. This process will take approximately 10 seconds to one minute, depending the SIM card type and information stored. It is recommended to only use new SIM cards with no data stored. After the self test cycle, the unit will attempt to connect to the GSM network. Once successfully connected to the GSM network, all LED's will be switched off except LED 1 (green) which will start flashing continuously indicating that the unit is ready for operation or programming.

# Programming and Settings

## Security Code/Pin

The GSM Communicator is programmed via TXT message from any mobile phone from any GSM network world wide or via internet texting facilities. All commands and setting must always start with a four digit security PIN, pre-set by the manufacturer to 1234. It is recommended to change this PIN (refer to “Changing the Security Code”). The PIN is followed by a space and the appropriate TXT command. Commands must be written only in lower case or capital letters not in combination.        -        PIN space command        -

- Examples: **1234 arm** or **1234 ARM** (arming/disarming the unit)

All commands are confirmed and acknowledged by the GSM Communicator with a reply TXT confirmation. When commands were entered incorrect the unit will send an error message.

## Basic Settings

### Time & Date

The GSM Communicator has a built in clock to indicate the time when messages are sent. This is very important when an alert message is sent as the message will include the time and date when the specific event occurred, triggering an alert.

To set up the actual time and date the command is:

- **1234 time 12.04.2007 14:30** (example for 12<sup>th</sup> April 2007, 2:30pm)

If the command was correct, you will receive the following TXT confirmation:

- **SIP300: time is setup**

### Storing Mobile Numbers

The GSM Communicator is able to contact up to three different mobile numbers per input triggered via TXT or call. Each mobile number has to be programmed with the corresponding input as illustrated at the following table.

Input 1	Input 2	Input 3
Number 1	Number 4	Number 7
Number 2	Number 5	Number 8
Number 3	Number 6	Number 9
Service Number (refer to page 20)		

The table shows that the first three mobile numbers will be allocated to input 1, the following three mobile numbers to input 2 and so on. The input itself can be custom named (refer to Naming Input Ports).

In the following example we will use a dummy mobile number which is 021123456 in order to illustrate programming. This number will receive a TXT or call when input 1, 2 or 3 has triggered.

To store the above mobile number for input 1, the command is:

- 1234 number1 021123456

To store the above mobile number for input 2, the command is:

- 1234 number4 021123456

To store the above mobile number for input 3, the command is:

- 1234 number7 021123456

If the commands were correct, you will receive the following TXT confirmation:

- SIP300: save ok

Number 2, 3, 5, 6, 8, and 9 can be programmed in the same way.

With the above information stored, the GSM Communicator is ready for operation. All other settings are pre-programmed by the manufacturer and can be viewed under **Factory Settings**. However further custom settings can be done and are described under **Custom Settings**.

## Deleting Mobile Numbers

To delete a stored number individually, for example mobile number stored under input 2 position 4, the command is:

- 1234 number4 delete

If the command was correct, you will receive the following TXT confirmation:

- SIP300: delete ok

## Report of Mobile Numbers Stored

To find out the list of all mobile numbers (including the service number) stored on the SIM of the GSM Communicator, the command is:

- 1234 listn

If the command was correct, you will receive a TXT confirmation containing all mobile numbers stored under the corresponding input ports as well as the service number.

To find out what specific mobile number is stored in which position, for example number stored under input 2 in positions 4 the command is:

- 1234 number4?

If the command was correct, you will receive the following TXT confirmation:

- SIP300: In position 4 save number 021123456

## Custom Setup

### Naming the GSM Communicator

The GSM Communicator can be named in order to identify the device and for what it is used for. For example, if the unit is used as a home alarm, the name could be “Home”. Each name can be made of max 16 characters including spaces. In the following example we will name the GSM Communicator – Home.

To program the device name, the command is:

- 1234 name home:

If the command was correct, you will receive the following TXT confirmation:

- home: save ok

### Naming the Input Ports

Each input can be named in order to identify the specific item, location or application. Each TXT has to be programmed with the corresponding input as illustrated at the following table. Each TXT can be made of max 16 characters including spaces.

Input 1	Input 2	Input 3
TXT 1	TXT 2	TXT 3

The table shows that TXT 1 will be allocated to input 1, TXT 2 to input 2 and so on.

For example, if the unit is used as a home alarm and input 1 is monitoring the entrance area, the corresponding message when the input is triggered, is:

- “home: entrance”.

To store the name (entrance) for input 1, the command is:

- 1234 txt1 entrance

If the command was correct, you will receive the following TXT confirmation:

- home: save ok

Input 2 and 3 can be programmed in the same way.

## Naming the Output Port R1

The output port can be named in order to identify what has been switched when it is activated. The output name can be made of max 16 characters including spaces. For example, if the unit is used as a home alarm, the output signal can be linked to a light circuit. The corresponding message when the output is activated would be:

- "home: light on".

To store a name (light on) for the output, the command is:

- 1234 nrel light

If the command was correct, you will receive the following TXT confirmation:

- home: save ok

The GSM Communicator is able to accommodate two additional, high power output ports via an external relay board (MREL1). These output ports are named R2 and R3 and cannot be renamed.

## Changing the Security Code

The GSM Communicator has a security PIN pre-set by the manufacturer to 1234. This PIN is used when programming and communicating with the unit. This PIN enables anybody to communicate with the unit from any mobile phone, any GSM network world wide or via internet texting facilities. It is recommended to change this PIN to maintain high security level. Do not disclose this PIN to anybody. In the event that the PIN is misplaced or lost, the GSM Communicator has to be reset to the original manufacturer's setting and all custom settings will be lost. The GSM Communicator can be reset to the original factory settings as described under section "Service Button Function".

To change the PIN from 1234 to 5532, the command is:

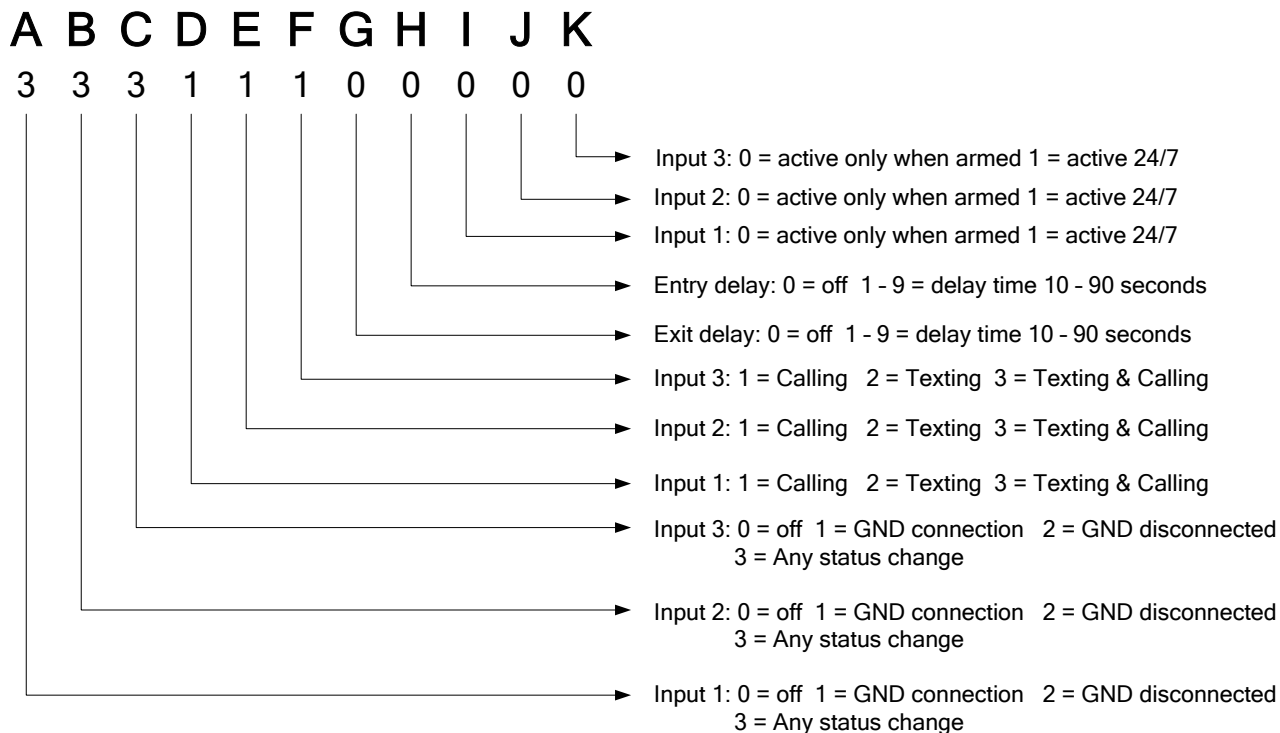
- 1234 npin 5532

If the command was correct, you will receive the following TXT confirmation:

- home: save ok

## Input Characteristics SETP1

All input characteristics such as input switching, input communication, delay timer and input status can be custom set for each individual application. The table below illustrates the versatility of characteristics available for programming.



The settings (SETP1 33311100000) shown in the table above are the factory setting. In order to customise these settings, use the following command:

- 1234 setp1 \_\_\_\_\_ (any combination as described below)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

Block **ABC** shows the options of the input switching characteristics. These settings will determine at what status the input will trigger an alarm. The settings available are as follows:

Setting	Switching Characteristic
0	Input switched off
1	GND connection
2	GND disconnected
3	Any status change

Block **DEF** shows the option of the input communication characteristics. These settings will determine what form of alert the unit will use to communicate.

Setting	Communication Characteristic
1	Calling
2	Texting
3	Texting & Calling

Block **GH** shows the delay timer characteristics. If the unit is armed (exit delay) all inputs will be blocked for a preset time. If the unit is disarmed (entry delay) only input 1 will be blocked for a preset time.

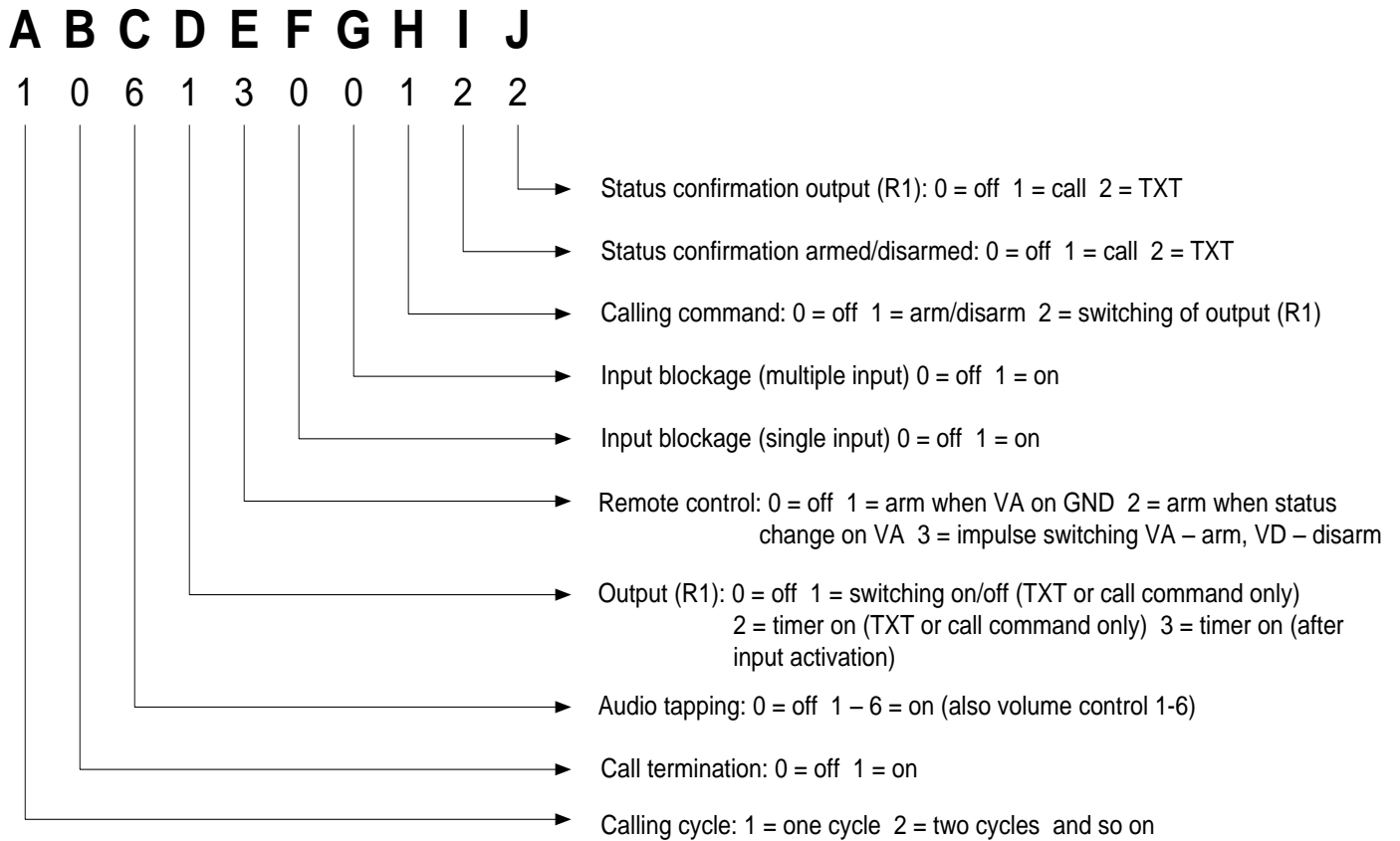
Setting	Delay Timer Characteristic
0	No delay time
1-9	Delay time 10 – 90 seconds

Block **IJK** shows the input status options. These settings will determine when an input will trigger an alarm.

Setting	Input Status
0	Only when unit is armed
1	24/7 irrespective if armed or disarmed

## System Characteristics SETP2

All system characteristics such as calling, calling cycle, audio tapping, output, control input, input, system status confirmation and output status confirmation can be custom set for each individual application. The table below illustrates the versatility of characteristic.



The settings (SETP2 1061300122) shown in the table above are the factory setting. In order to customise these settings, use the following command:

- 1234 setp2 \_\_\_\_\_ (any combination as described below)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

Position **A** shows the options of calling cycles the GSM Communicator will use when inputs are triggered and if the calling option is programmed under SETP1 position D, E, and F. In this mode the unit will call once or up to four times with a one minute interval if the call has not been answered depending setting in position **B** (see explanation position B).

Setting	Calling Cycle Characteristic
1	One cycle
2	Two cycles
3	Three cycles
4	For cycles

Position **B** shows the option to terminate any calling attempt to any number programmed under a specific input after an alert call has been picked up by any of those numbers.

Setting	Calling Cycle Characteristic
0	No termination of calling attempts
1	Termination of calling attempts

Position **C** shows the option of audio tapping.

Setting	Audio Tapping Characteristic
0	No audio tapping
1-6	Audio tapping on; volume control 1 – low, 6 - high

Position **D** shows the options of output port (R1) characteristics.

Setting	Output Characteristic
0	Output switched off
1	Output can be switched on and off via TXT or call
2	Output stays activated after switched on (by TXT or call command only) for a specific time period set under RTIME. It can be switched off (by TXT or call command) before the time period has lapsed
3	Output will be activated after an input is triggered. Settings in SETPR will determine which input will activate the output. The output remains activated for a specific time period set under RTIME

Position **E** shows the option of setting the control input characteristics for input terminal VA and VD. These input terminals are used for remote control devices to arm and disarm the unit such as remote control key pads and remote control push buttons.

Setting	Control Input Characteristic
0	Remote control function switched off
1	Unit will arm when control input port VA is switched permanently to ground (GND)
2	Unit will arm/disarm when control input port VA changes status (N/O – N/C)
3	Unit will arm when control input port VA receives a negative (GND) impulse. Unit will disarm when control input port VD receives a negative (GND) impulse.

Position **F** shows the option of setting the input characteristics to block multiple activation of the **same** input for a period of 15 minutes.

Setting	Input Characteristic
0	No input blockage
1	Input blockage (15 minutes)

Position **G** shows the option of setting the input characteristics to memorise multiple activations of **any** consecutive input whilst the GSM Communicator is processing all data.

Please note, if this option is switched off, and if an input is triggered and the unit sends an alert TXT or call, any other input which is triggered during that data processing (8 sec – max 1 min depending of how many numbers need to be notified and if the call or TXT is sent to an overseas number) will not be registered by the GSM Communicator. Only after the data processing of the first triggered input is completed will the unit be ready to receive and process the next triggered input.

Setting	Input Characteristic
0	No consecutive input memory whilst data processing
1	Consecutive input memory whilst data processing

Position **H** shows the option of arming/disarming the unit or switching the output port (R1) via calling. Only mobile numbers stored under input 1 (mobile number 1, 2 and 3) are able to use this

function. Please note: If the audio tapping function is switched on – use max of 4 ringing tones. If the unit receives more than 5 ringing tones, it will switch the audio tapping function on. If the audio tapping function is switched off, the unit will only accept one ringing ton and terminate the connection before executing its command.

Setting	Calling Characteristic
0	Calling command switched off
1	Calling command to arm and disarm
2	Calling command to switch output port (R1)

Position I shows the option of setting the confirmation method (phone call or text) when the unit is armed or disarmed via TXT or call only. Please note, if the calling option is selected, the unit will only confirm the armed status not the disarmed status via phone call. If selecting the TXT option, the unit will confirm both the armed and disarmed status.

Setting	Status Confirmation Characteristic
0	No confirmation of status
1	Confirmation via phone call
2	Confirmation via TXT

Position J shows the option of setting the confirmation method (phone call or text) when the output port R1 is activated or deactivated. Please note, if the calling option is selected, the unit will only confirm when the output port R1 is activated not deactivated via phone call. If selecting the TXT option the unit confirms both activation and deactivation. Please also note, if the output characteristic SETP2 option D is set to position 2 or 3 (timer mode RTIME), the unit will not send a TXT when the time has lapsed and the output port R1 is deactivated.

Setting	Output Confirmation Characteristic
0	No confirmation of status
1	Confirmation via phone call
2	Confirmation via TXT

Note: Calling confirmation under position I and J – only one position can be allocated to calling confirmation at one time , not all simultaneously.

## System Diagnostic SETPS

Critical system parameter are excess able from a dedicated mobile number (here called service number) in form of diagnostic TXT. A dedicated mobile number has to be set up as the service number (“numbers”) which can be different to all the numbers stored under “input ports”

To store a service number, the command is:

- 1234 numbers 021123456

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

These diagnostics can be customized as shown in the following table.

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	
1	0	0	0	1	0	0	
							→ Diagnostic TXT sent to other than the dedicated service number: 0 = off 1 = on
							→ Diagnostic TXT if unauthorized call or TXT: 0 = off 1 = on
							→ Diagnostic TXT if processor exceeds 50 degrees Celsius: 0 = off 1 = on
							→ Diagnostic TXT if power supply stabilizes to 12 V: 0 = off 1 = on
							→ Diagnostic TXT if power supply ≥ 14V: 0 = off 1 = on
							→ Diagnostic TXT if power supply ≤ 10.5V: 0 = off 1 = on
							→ Diagnostic TXT after system recovery: 0 = off 1 = on

The settings (SETPS 1000100) shown in the table above are the factory setting. In order to customise these settings, use the following command:

- 1234 setps \_ \_ \_ \_ \_ (any combination as described below)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

Position **A** shows the option of receiving a diagnostic TXT when the GSM Communicator has lost and regained the GSM signal.

Position **B** shows the option of receiving a diagnostic TXT when the GSM Communicator’s power supply drops below 10.5V.

Position **C** shows the option of receiving a diagnostic TXT when the GSM Communicator's power supply exceeds 14.0V.

Position **D** shows the option of receiving a diagnostic TXT when the GSM Communicator's power has recovered after the supply dropped or exceeded (as indicated under B and C) the recommended level.

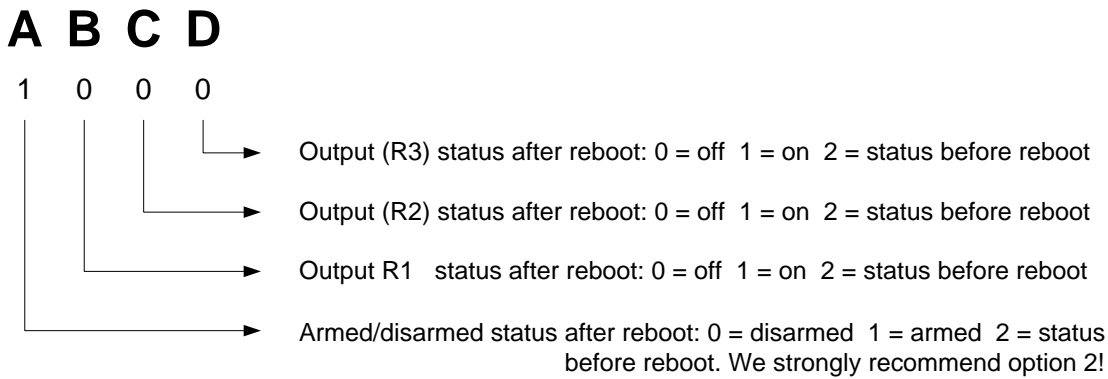
Position **E** shows the option of receiving a diagnostic TXT when the GSM Communicator's processor temperature exceeds 50 degrees Celsius.

Position **F** shows the option of receiving a diagnostic TXT when an unauthorized mobile number (a number not stored in the GSM Communicator) is trying to excess the unit via call or TXT or if an authorized mobile number is trying to send commands with an incorrect security code. This diagnostic TXT will only be sent to the above mentioned service number).

Position **G** shows the option of receiving a diagnostic TXT to the first stored mobile numbers under each input port (mobile number 1, 4, and 7) as illustrated in the table under section "Storing Mobile Numbers"

## System Status after Reboot SETPV

The GSM Communicator will reboot if the GSM signal is temporarily lost or if the GSM processor exceeds 50 degrees Celsius or if the power supply exceed 14 V for an extended period or if the power supply is switched off temporarily. For security reasons it is important to be able to have the option to maintain the system parameter “arm/disarm, output 1 (2 and 3 optional) activated/deactivated” to the status before the unit has shut down or to any other position necessary.



The settings (SETPV 1000) shown in the table above are the factory setting. In order to customise these settings, use the following command:

- 1234 setpv \_ \_ \_ \_ (any combination as described below)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

Position **A** shows the option of maintaining the armed/disarmed status after rebooting.

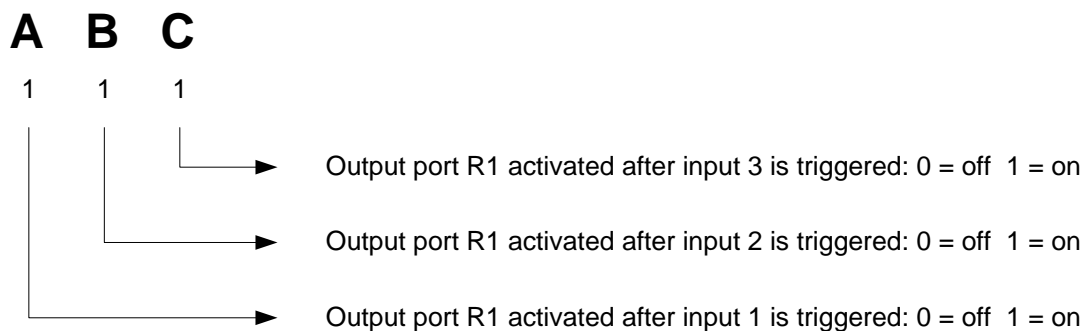
Position **B** shows the option of maintaining the activated/deactivated status of output port R1 after rebooting.

Position **C** shows the option of maintaining the activated/deactivated status of output port (R2) (optional) after rebooting.

Position **D** shows the option of maintaining the activated/deactivated status of output port (R3) (optional) after rebooting.

## Output Port R1 Characteristics SETPR

The GSM Communicator is able to switch output port R1 automatically after any input is triggered. This allows to virtually switch anything, thus making the GSM Communicator a tool to automate custom applications, i.e. security, process control, automotive etc. This option is only available in conjunction with settings of system characteristics SETP2 position D option 3. The output port R1 remains activated for a specific time period set under RTIME.



The settings (SETPR 111) shown in the table above are the factory settings.

In order to customise what input will trigger the output R1, use the following command:

- 1234 setpr \_\_\_ (any custom combination)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: Save ok

## Output Timer RTIME

The activation elapse time of output port R1 (output switched on for a preset time) can be custom set to suit various applications. This option is only available in conjunction with settings of system characteristics SETP2 position D option 2 and 3.

The timer mode under setting SETP2 position D option **2** and **3** is illustrated under the following table:

Timer Mode – SETP2 Position D Option	Timer Setting	Duration
2	00:00	Impulse (approx 50msec)
2	00:01	1 minute
2	01:10	1 hour ,10 minutes
2	99:59	99 hours, 59 minutes (max setting)
3	00:01	1 second
3	00:59	59 seconds (max setting)

In order to customise the desired time for option **2**, use the following command:

- **1234 rtime 00:10** (example for 10 minutes)

If the command was correct, you will receive the following TXT confirmation:

- **SIP300: relay timer set: 00h : 10m**

In order to customise the desired time for option **3**, use the following command:

- **1234 rtime 00:10** (example for 10 seconds)

If the command was correct, you will receive the following TXT confirmation:

- **SIP300: relay timer set: 10sec.(alert siren mode).**

## Automatic Status Report AUTS

Status report of critical parameters:

- Name of The GSM Communicator
- Armed/disarmed
- Input ports active/deactivate
- Output ports (R1) active/deactivate
- GSM network provider
- GSM signal strength
- Power supply voltage
- Processor temperature
- Date and time

These can be obtained at regular intervals (or by TXT command explained under Reports). These intervals can be customized as shown in the following table.

Setting	Interval
1/10	Every day at 10:00 am
7/14	Every week at 2:00 pm
99/23	Every 99 days (max setting) at 11:00 pm

In order to customise these intervals, use the following command:

- **1234 auts 1/10** (example for every day at 10: am)

If the command was correct, you will receive the following TXT confirmation:

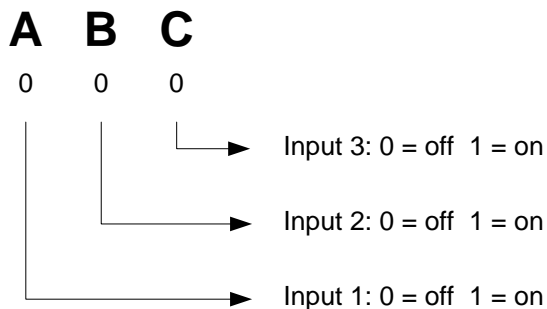
- **SIP300: set (period 1 days, in 10 hours)**

## Special Input Characteristics SETPP

Each input status change (from passive to active back to passive) can trigger separate alert messages. If for example input 1 triggers from passive to active, the status change from being a N/O contact to N/C contact will trigger the alert message, namely "TXT1B". If input 1 triggers again, the status change from N/C contact to N/O contact it will trigger the alert message "TXT1". These alert messages can be custom named (for example "gate open – gate close").

The same configuration applies to input 2 and 3 with the corresponding alert messages "TXT2B - TXT2" and TXT3B – TXT3. In this way critical parameters in different applications can be monitored remotely.

The output port R1 can be activated after any status change of any input under this option in conjunction with settings under system characteristics SETP2 position D option 3 and settings under Output Timer RTIME option 3.



The settings (SETPP 000) shown in the table above is the factory settings. In order to customise which input will trigger an alert message, use the following command:

- 1234 setpp \_\_\_ (any combination as described below)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

Position **A** shows the option of input 1 triggering alert message TXT1 and TXT1B.

Position **B** shows the option of input 2 triggering alert message TXT2 and TXT2B.

Position **C** shows the option of input 3 triggering alert message TXT3 and TXT3B.

Input Status	Input 1	Input 2	Input3
N/O	TXT1	TXT2	TXT3
N/C	TXT1B	TXT2B	TXT3B

To store an appropriate name for each input status (example input 1), the command is:

- 1234 txt1 gate open (example – gate open)
- 1234 txt1b gate closed (example – gate closed)

If the command was correct, you will receive the following TXT confirmation:

- SIP300: save ok

Input 2 and 3 can be programmed in the same way.

# Operation Commands

The GSM Communicator is able to be controlled and operated via simple TXT commands. Commands such as arming and disarming, switching of output ports, and activating the sleep mode are made simple and easy via TXT messages.

## Arming and Disarming the GSM Communicator

The GSM Communicator can be activated (armed) or deactivated (disarmed) via TXT or call. The calling option is only available with mobile numbers stored under input 1 (refer to table under section “Storing Mobile Numbers”) and in conjunction of settings under “Calling Characteristics SETP2 position H, option 1”.

To arm the unit via TXT, the command is:

- **1234 arm**

To disarm the unit via TXT, the command is:

- **1234 disarm**

If these commands were correct, you will receive confirmation depending settings under “System Characteristics SETP2 position I”. If the TXT confirmation is selected, you will receive the following TXT confirmation

- **SIP300: arm**      or      **SIP300: disarm**

If the calling confirmation is selected, you will receive a confirmation call (1-3 rings) when the unit is armed but no confirmation call when it is disarmed.

## Switching Output Port R1

Output port R1 can be activated or deactivated via TXT or call. The calling option is only available with mobile numbers stored under input 1 (refer to table under section “Storing Mobile Numbers”) and in conjunction of settings under “Calling Characteristics SETP2 position H, option 2”.

To switch the output port R1 on via TXT, the command is:

- **1234 r1on**

To switch the output port R1 off via TXT, the command is:

- **1234 r1off**

If these commands were correct, you will receive confirmation depending settings under “System Characteristics SETP2 position J”.

If the TXT confirmation is selected, you will receive the following TXT confirmation

- SIP300: r1on            or            SIP300: r1off

If the calling confirmation is selected, you will receive a confirmation call (1-3 rings) when the output port (R1) is switched on but no confirmation call when it is switched off.

## Switching Output Port R2 and R3

External output port R2 and R3, using the external relay board MREL 1, can be switched on and off with the following TXT commands:

- 1234 r2on                    or                    1234 r3on
- 1234 r2off                   or                    1234 r3off

If these commands were correct, you will always receive the following TXT confirmation:

- SIP300: relay 2 on            or                    SIP300: relay 2 off
- SIP300: relay 3 on            or                    SIP300: relay 3 off

## Sleep Mode

If the GSM Communicator is installed where no mains power supply is available, the unit can be put into sleep mode, reducing the power consumption from 40mA (neutral status) to approx 7mA (sleep mode). The unit will wake up if input 1 or input 2 is triggered. When triggered, the unit will connect to the GSM network, complete a self test modus and then send an alert TXT or call. This process will last approx one minute. The unit will automatically go back to sleep mode when no further input is triggered after about five minutes.

Please note that during **sleep mode** all functions are switched **off** and the unit cannot be remotely activated or controlled. Only during the wake up status normal operation is possible.

To activate the sleep mode, the TXT command is:

- 1234 sleep on

If the command was correct, you will receive the following TXT confirmation:

- SIP300: sleeping mode activated, system switched off in 5 minutes

To deactivate the sleep mode, the TXT command is:

- 1234 sleep off

If the command was correct, you will receive the following TXT confirmation:

- SIP300: sleep off

# Reports

## Status Report STAT

Status report of critical system parameters as described under “Automatic Status Report AUTS” can be obtained via the following TXT command:

- 1234 stat?

If the command was correct, you will receive a TXT confirmation containing the following information:

- Name of The GSM Communicator
- Armed/disarmed status
- Input ports active/deactivate
- Output ports R1 active/deactivate
- GSM network provider
- GSM signal strength
- Power supply voltage
- Processor temperature
- Date and time

## Custom Settings

The following custom settings can be obtained via TXT command:

Custom Setting	TXT Command
Input Characteristics SETP1	1234 setp1?
System Characteristics SETP2	1234 setp2?
System Diagnostic SETPS	1234 setps?
System Status After Rebooting SETPV	1234 setpv?
Output Characteristics SETPR	1234 setpr?
Output Timer Characteristics RTIME	1234 rtime?
Special Input Characteristics SETPP	1234 setpp?

If the commands are programmed correctly, you will receive a TXT confirmation containing the appropriate settings as described under each category. For example:

- 1234 setp1?                      - SIP 300: “SETP1” is: 3331110000

# Auxiliary Functions

## Audio Tapping

This facility provides the operator with an audio surveillance option. Any noise around the installation of the GSM Communicator can be picked up. This option is only available with mobile numbers stored under input 1 (refer to table under section “Storing Mobile Numbers”) and in conjunction of settings under System Characteristics SETP2 position C. The unit has to receive a minimum of five ringing tones in order to switch the audio surveillance on.

The audio output can be used to join hands-free kits to establish a two way communication with the GSM Communicator or to connect the audio output with an amplifier for larger speakers. With this facility, it is possible to address an intruder, who would definitely be unpleasantly surprised, to hear the voice of the owner.

The maximum audio surveillance time is one minute as the unit is not a listening device.

## Additional Output Ports (R2) and (R3)

The GSM Communicator is extremely flexible and can accommodate peripheral devices. The external relay board MREL1 module offers the extension to two additional output ports R2 and R3 to operate various appliances, lighting systems etc.

The MREL relay board consists of two high power relays capable of switching 250V, 8A.

## Factory Settings

The GSM Communicator can be reset to the original factory settings as described under section “Service Button Function”.

The factory settings are:

- Security code: 1234
- Device name: SIP 300
- Output port 1 Relay 1
- SETP1 33311100000
- SETP2 1061300122
- SETPS 1000100
- SETPV 1000
- SETPR 111
- SETPP 000

## **Guidelines for Safe and Efficient Use**

Please read this information before using your GSM Communicator. These instructions are intended for your safety. Please follow these guidelines. If the product has been subject to any of the conditions listed below or you have any doubt as to its proper function, make sure you have the product checked by a certified service partner before using it. Failure to do so might entail a risk of product malfunction or even a potential hazard to your health.

## **Recommendations for Safe Use of Product**

- Always treat your product with care and keep it in a clean and dust-free place.
- Do not expose your product to liquid or moisture or humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not drop, throw or try to bend your product.
- Do not attempt to disassemble or modify your product. Only authorised personnel should perform service.
- Do not use your product in an area where a potentially explosive atmosphere exists.

## **Antenna**

The GSM Communicator has an antenna. Use of antenna devices not marketed by Pacific GSM Limited specifically for this model could damage your GSM Communicator, reduce performance, and produce SAR levels above the established limits (see below).

## **Radio Frequency (RF) Exposure and Specific Absorption Rate (SAR)**

The GSM Communicator is a low-power radio transmitter and receiver similar to an ordinary cell phone. When it is turned on, it emits low levels of radio frequency energy (also known as radio waves or radio frequency fields).

Governments around the world have adopted comprehensive international safety guidelines, developed by scientific organizations, through periodic and thorough evaluation of scientific studies. These guidelines establish permitted levels of radio wave exposure for the general population. The levels include a safety margin designed to assure the safety of all persons, regardless of age and health, and to account for any variations in measurements. Specific Absorption Rate (SAR) is the unit of measurement for the amount of radio frequency energy

absorbed by the body. The SAR value is determined at the highest certified power level in laboratory conditions, but the actual SAR level of the GSM Communicator while it is operating can be well below this value. This is because the GSM Communicator is designed to use the minimum power required to reach the network. Variations in SAR below the radio frequency exposure guidelines do not mean that there are variations in safety. While there may be differences in SAR levels among GSM Communicators, all Pacific GSM communicator models are designed to meet radio frequency exposure guidelines.

## **Disposal of Old Electrical and Electronic Equipment**



This symbol indicates that all electrical and electronic equipment included shall not be treated as household waste. Instead it shall be left at the appropriate collection point for recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## **End User Licence Agreement**

This wireless device, including without limitation any media delivered with the device, (“Device”) contains software owned by Pacific GSM Limited and its affiliated companies and its third party suppliers and licensors (“Software”). As user of this Device, Pacific GSM Limited grants you a non-exclusive, non-transferable, non-assignable license to use the Software solely in conjunction with the Device on which it is installed and/or delivered with. Nothing herein shall be construed as a sale of the Software to a user of this Device. You shall not reproduce, modify, distribute, reverse engineer, decompile, otherwise alter or use any other means to discover the source code of the Software or any component of the Software. For avoidance of doubt, you are at all times entitled to transfer all rights and obligations to the Software to a third party, solely together with the Device with which you received the Software, provided always that such third party agrees in writing to be bound by these rules. You are granted this license for a term of the useful life of this Device. You can terminate this license by transferring all your rights to the Device on which you have received the Software to a third party in writing. If you fail to comply with any of the terms and conditions set out in this license, it will terminate with immediate effect.

## Disclaimer

This device is designed for indoor use only unless protected in appropriate enclosure. The GSM Communicator is reliant on adequate GSM coverage. In the event of inadequate or no GSM coverage, Pacific GSM Limited can not be held liable for any damage or loss.

The GSM Communicator was tested with SIM cards provided by "Vodafone New Zealand. Pacific GSM Limited can not be held liable for any malfunction with the use of other SIM cards. The GSM Communicator is only for the use within the borders of NEW ZEALAND and AUSTRALIA.

Only use auxiliary equipment tested and approved by Pacific GSM Limited. Do not attempt to take apart, open, service, or modify the hardware device. Doing so could present the risk of electric shock or other hazard. Any evidence of any attempt to open and/or modify the device, including peeling punching, or removal of any labels, will void the Limited Warranty.

Never pass security code or the mobile number of the GSM Communicator to an unauthorised third party.

All rights reserved. Except as expressly provided herein, no part of this manual may be reproduced, copied, transmitted, disseminated, downloaded or stored in any storage medium, for any purpose without the express prior written consent of Pacific GSM Limited.

Information in this document is subject to change without any notice. Pacific GSM Limited reserve the right to change or improve its products and to make changes in the content without obligation to notify any person or organisation of such changes or improvements. Visit the Pacific GSM Web site ([www.pacificgsm.co.nz](http://www.pacificgsm.co.nz)) for current updates and supplemental information concerning the use and operation of this and other Pacific GSM products.

## Warranty

Subject to the condition of this Limited Warranty, Pacific GSM Limited warrants this product to be free from defects in design, material and workmanship at the time of its original purchase by a customer. This Limited Warranty will last for a period of one year as from the original day of purchase and for a period of one year for all original accessories (such as microphone, GSM aerial).

The warranty does not cover any damages caused due incorrect installation and the use of any auxiliary devices not approved by Pacific GSM Limited.

Any damage to the product as a result of misuse, abuse, neglect, accident, incorrect wiring, improper installation, repair or alteration or installation outside Pacific GSM Limited approved dealers will void warranty.

# Installation Worksheet

## Client Details

Name				
Address				
Contact Number	Home		Mob	
Installation Date		Installed By		

## SIM Card Details

Contact Number	
Security PIN	
Online ID	
Password	
Date Registered	

## SIP 300

IMEI	
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## Basic Settings

Security PIN	
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## Mobile Numbers Stored

Input	Number	Stored Mobile Numbers	Name
1	Number1		
1	Number2		
1	Number3		
2	Number4		
2	Number5		
2	Number6		

3	Number7		
3	Number8		
3	Number9		

## Custom Settings

### Input Names

Input 1	
Input 2	
Input 3	

### Output Names

Output 1	
----------	--

### Input Characteristics SETP1

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>

### System Characteristics SETP2

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>

### System Diagnostics SETPS

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>

### System Status after Reboot SETPV

A	B	C	D

### Output Port R1 Characteristics SETPR

A	B

### Output Timer Rtime

Timer Mode – SETP2 Position D Option	Timer Setting

### Special Input Characteristics SETPP

A	B	B

### Input Alert Messages under SETPP

Input	Input Status	Alert Message	Custom Alert Message
1	N/O	TXT1	
1	N/C	TXT1B	
2	N/O	TXT2	
2	N/C	TXT2B	
3	N/O	TXT3	
3	N/C	TXT3B	





## Quick list of commands

Commands	Function	Page
ARM	Arm the communicator	27
DISARM	Disarm the communicator	27
R1ON	Switching output port R1 ON	27
R1OFF	Switching output port R1 OFF	27
NUMBER1 02.....	Store the first mobile number for input 1	10
NUMBERS 02.....	Store the service mobile number	20
NUMBER4 delete	Delete a stored number under input2 position 4	11
TIME 12.04.2007 14:30	Set up the actual time and date	10
LISTN	Find out the list of all mobile numbers stored	11
NUMBER4?	Find out what mobile number is stored in which position	12
SLEEP ON	Activate the sleep mode	28
STAT?	Status report of actual system parameters	29
NAME (text)	Program an equipment name ( max 16 characters)	12
TXT1 (text)	Store a name for input 1 ( max 16 characters)	12
NREL (text)	Store a name for output 1 ( max 16 characters)	13
NPIN ....	Change the PIN	13

# Conformity

The equipment is in accordance with the following regulations and standards:

EMC: EN 301 489- 01 V1.4.1  
EN 301 489- 07 V1.2.1  
ČSN EN 55022 – Class B  
ČSN EN 61000- 6- 2  
ČSN EN 61000- 4- 2 A  
ČSN EN 61000- 4- 3 A  
ČSN EN 61000- 4- 4 A  
ČSN EN 61000- 4- 6 A

Radiation: EN 301 511 V9.0.2

Safety compliance: ČSN EN 60950- 1  
ČSN EN 60068- 2- 1+A1  
ČSN EN 60068- 2- 2+A1

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New Zealand Supplier Code Number (SCN):



Z1262

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## Technical Support

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