



## GSM 4G AUTO DIALLER PLUS

Control and Monitoring from your mobile phone



MODEL 4GAD+



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## Product Information

The GSM Auto Dialler Plus is a multi purpose unit with both 2G,3G &4G capabilities. It is compatible with all alarm panels with negative triggering through three inputs and one alarm input as well as having 2 relay outputs for switching on or off external devices such as, temperature monitoring, mains failure monitoring with battery back up and a **optional** microphone and speaker are available seperately for two way communication.

## Specification

- GSM Frequency: Quadband Frequency 850/900/1800/1900/2100 Mhz
- 4G Bands : B1 -B5, B7 - B8, B12 - B14, B18 - B20, B25 , B26, B28 , B66, B71
- Power Supply Voltage: 9 - 24 volts DC
- Current Used in Standby Mode: 35 Milliamps
- Max Current: Up to 2 Amps
- Standard 2G 3G 4G Simcard
- No landline required
- Dimensions - L170 x W120 x H60mm
- Weight - 360 grams
- **Operating Temperature: -10...+40°C**
- Signal Strength Function
- Stay Active Simcard Function
- Watchdog and Self Repair Function
- 3 Inputs and 1 Alarm Input
- 2 - 10 Amp Relay Outputs
- **1 Standalone Alarm Sensor Input**
- Temperature Reading by Text Message
- Temperature Alarm Controller
- Optional Speaker to speak to people near the unit
- Optional Microphone you can call into and listen to the surroundings of the unit.
- Mains Failure and Restore Alarm
- Battery Backup for up to 24 hours standby

## PCB Reference

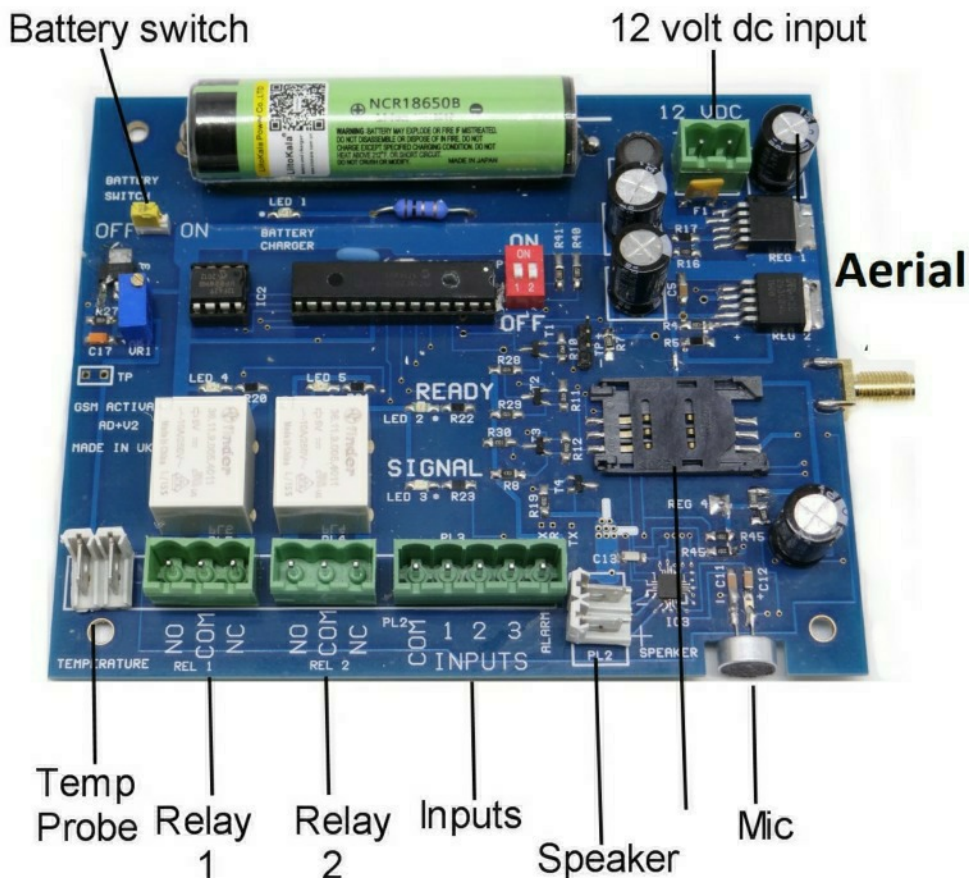


Figure 1

### **IMPORTANT - PLEASE READ**

PLEASE MAKE SURE YOU DISCONNECT THE POWER FROM POWER INPUT AND REMOVE THE BATTERY LINK WHEN YOU FIT THE SIMCARD AND PLACE THE SIMCARD WITH THE CLIPPED CORNER FACING OUT WARDS. SEE PICTURE ABOVE.

Signal LED (blue) - The blue LED flashes once per second indicating a signal has been found.

Ready LED (green) - The green LED will come on when the unit is ready for operation.

Charger LED (red) - The red LED indicates that the battery is in charging mode.

Battery Switch - push on to turn battery backup on (battery only charges with battery switch on)

### Dipswitch

The dialler can work on 2G, 3G & 4G networks. The module it uses works worldwide with all simcard (see page 3 for applicable bands)

You can choose which frequency the unit will use at the start by using the dipswitch combinations below

1 - If Dipswitch 1 Set to OFF & Dipswitch 2 Set to OFF = Unit boots up in 2G

2 - If Dipswitch 1 Set to ON & Dipswitch 2 Set to OFF = Unit boots up in 3G

3 - If Dipswitch 1 Set to ON & Dipswitch 2 Set to ON = Unit boots up in 4G

## Installing your Simcard

New SIM cards will need registering before they can be used. Full details of how this is done can normally be found in the SIM card pack. It will normally require that the SIM card is inserted into a mobile phone, a number dialled and instructions followed. While the SIM is in the mobile phone it would be a good time to disable call diverts, ring back and to disable features such as **voicemail** and **text** alerts.

The Auto Dialler has a built in "sim active function" which keeps track of the unit's activity. If there has been no usage for 6 weeks, it will send a text message to a preset recorded number to keep the simcard active. This then eliminates the problems of sims being shut down if they are unused for 3 months.

Activate and put credit on your simcard and disable voicemail using the following codes

Vodafone:	call 1210	Tesco	call 2915
T-Mobile:	call 222	O2	call 1760
Orange:	call 4502	Giff Gaff	call 1626
EE - send the text message command VM OFF to 150			

**ENSURE THE UNIT IS POWERED DOWN AND BATTERY TURNED OFF BEFORE INSERTING THE SIMCARD.**

- 1: Slide back the sim door and lift it up.
- 2: Slide the simcard in to the door making ensuring that the clipped corner of the simcard lines up with the clipped corner of the simcard holder.
- 3: Close the sim door.
- 4: Slide the sim door to lock the simcard in place.

Connect 9 through to 24 volts DC to the input connector as per figure 1. Once power has been applied (referring to figure 1) the **blue** network LED light will flash once every second. Once a signal has been found the **green** LED will come on and stay on indicating the unit is now ready for use.

## Signal Strength

Signal strength can be checked by sending the text command **#status#**  
The unit will reply back with a score from 1 - 30. Anything less than a score of 10 will make the unit unreliable.

**We recommend doing a signal strength on 2G , 3G and 4G (see diagram page 4) to see which frequency is strongest**

**Note if using Giff Gaff simcards please disable balance notifications in your Giff Gaff account**

## Programming Contact Numbers

The 4G Auto Dialler Plus has four inputs for a connection to electrical equipment plus separate hardware for temperature, mains failure and external sensing. When these are triggered the unit will call or text up to 3 separate numbers which can be stored on to the unit.

To programme the numbers you want to use, follow the examples below by sending the text message command to the simcard in the auto dialler.

NOTE - We have colour coded the symbols hash (#) and (=) to make programming easier.

To programme the mobile numbers please follow this example:

#PH1=07712345678# - Stores the mobile/landline phone number as contact no: 1

#PH2=01903123456# - Stores the mobile/landline phone number as contact no: 2

#PH3=07123456789# - Stores the mobile/landline phone number as contact no: 3

A maximum of 3 phone numbers in total.

To delete a stored number use the following example

#PH1=DELETE# - YOU CANNOT DELETED NUMBER 1 - ONLY OVERRIDE

#PH2=DELETE# - This deletes stored contact number 1

#PH3=DELETE# - This deletes stored contact number 1

### NOTE

Please send one message at a time and wait for the auto dialler plus to send you the text Acknowledgement '**NUMBER STORED**' before you try to send another number. This may take a few minutes depending on how busy the network is at the time.

## How to Programme the (SMS) Text Message

You can now change the alarm message to one of your choosing.

To change the message send the text command as follows:

- #MESS1=YOURMESSAGE# This sets your custom message for input 1
- #MESS2=YOURMESSAGE# This sets your custom message for input 2
- #MESS3=YOURMESSAGE# This sets your custom message for input 3
- #MESS4=YOURMESSAGE# This sets your custom message for input 4

The default message is INPUT ACTIVATED

**Note** - you can only use a maximum of 30 characters including spaces for your customised message.

## Telephone Call Alerts

The auto dialler can be programmed to send you a telephone call after each text alarm has been sent. You will receive approximately three ring tones. The unit will then hang up automatically. This prevents call charges being incurred.

To set call alerts to ON please send the text command

#CALL=ON#

The unit will reply back with "call on"

To disarm call alerts please send the text command

#CALL=OFF#

If the function has been set to ON you will receive a text message and shortly after a phone call.

## How to Use the Relay Outputs

The 4G Auto Dialler has two relay outputs which can be used to switch on external devices such as lighting, sirens etc...

Relay 1 is independent and can be activated by SMS message  
Relay 2 is independent and can be activated by SMS message

### Auto Relay Trigger (Relay 2)

Relay 2 can be used to turn on a siren or lighting etc , for approximately 17 seconds automatically when an input or alarm have been triggered. Please be aware of any conflicts this may cause if you are already using relay 2 as an independently activated relay.

To turn this function on please send the SMS

**#AUTO=ON#** this will turn the AUTO function on for relay 2 only  
**#AUTO=OFF#** this will turn the AUTO function off for relay 2 only (default setting is off)

### Activation by SMS Text Message

By texting the unit you can turn relay 1 and 2 ON or OFF individually. Below, are examples on how to do this.

**#REL1=ON#** This will turn on relay 1  
**#REL1=OFF#** This will turn off relay 1  
**#REL2=ON#** This will turn on relay 2  
**#REL2=OFF#** This will turn off relay 2

After each operation the unit will reply with the status report **REL 1 ON/OFF**

It is possible to pulse relay 1 & 2 for a period of 17 seconds. You will need to send the text message as follows.

**#PUL=REL1#** - This will pulse relay 1 for 17 seconds  
**#PUL=REL2#** - This will pulse relay 2 for 17 seconds

The unit will reply back with **REL1** or **REL2 PULSE**



# Using the Inputs

## Inputs 1 2 & 3 - Automatically Reset

Inputs 1 2 & 3 are triggered by a negative pulse eg: pulled to the ground for a period of not less than one second. The image (at the bottom of the page) is a typical application of how to connect the unit to an alarm panel.

Input 1 and Input 2 are constantly monitored by the auto dialler and will react immediately when an input is pulled to the ground. The inputs will automatically reset when the input triggers are cleared/ reset. The Auto-Dialler will then be ready for the next trigger input.

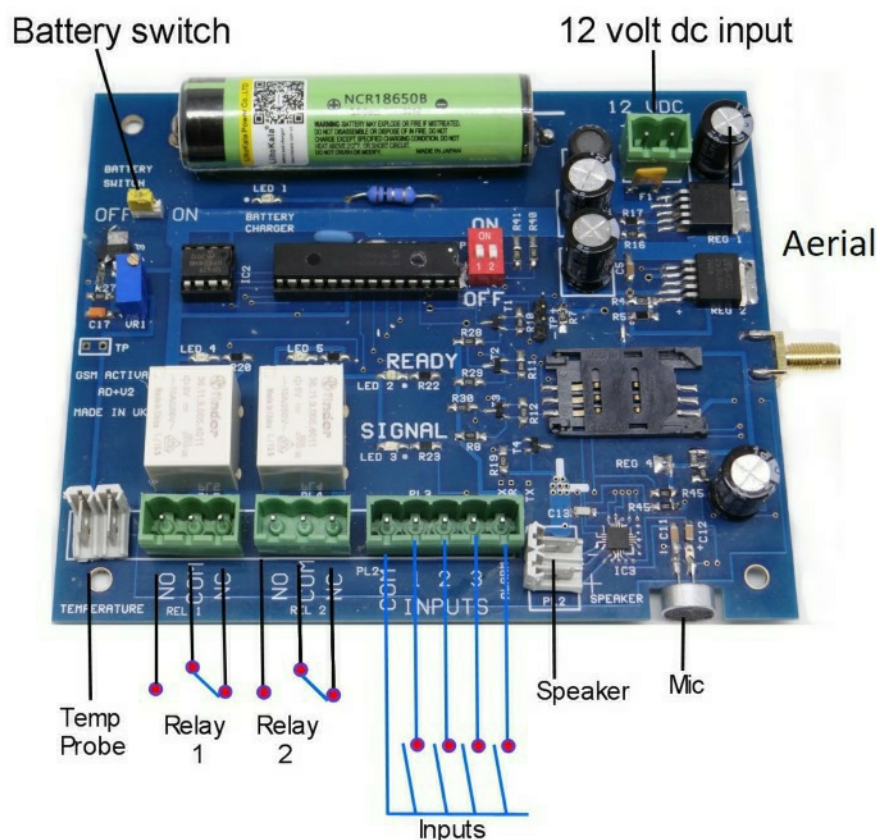
## Alarm Input - Manual Reset

### Alarm Input

This is triggered by a negative pulse eg: pulled to the ground for a period of not less than one second. Before this can be triggered you must activate the alarm input by sending the text command as follows. The units will need manually activating again once triggered by a text message.

**#ALARM=ON#** - This will activate the alarm if the input is pulled to the ground. You will receive a text message reading **ALARM TRIGGERED**

**#ALARM=OFF#** - This will deactivate the alarm. Pulling the input to the ground will mean you will receive NO notifications.



## Mains Failure Alarm

By connecting to the mains power using a 9/24v power supply the auto dialler can act as a mains failure alarm. It will monitor the power connected to the power input and send a text message alert if the power is disconnected.

When the power is disconnected for a period of 4 minutes, you will receive the text message alert **POWER LOSS**. When the power is restored you will receive the text message alert **POWER RESTORED**.

## Battery Backup

When power has been disconnected the unit will revert to the onboard battery backup. The battery back will operate the auto dialler for up to 24 hours before it will need to be recharged by connecting 12 volts back to the power input.

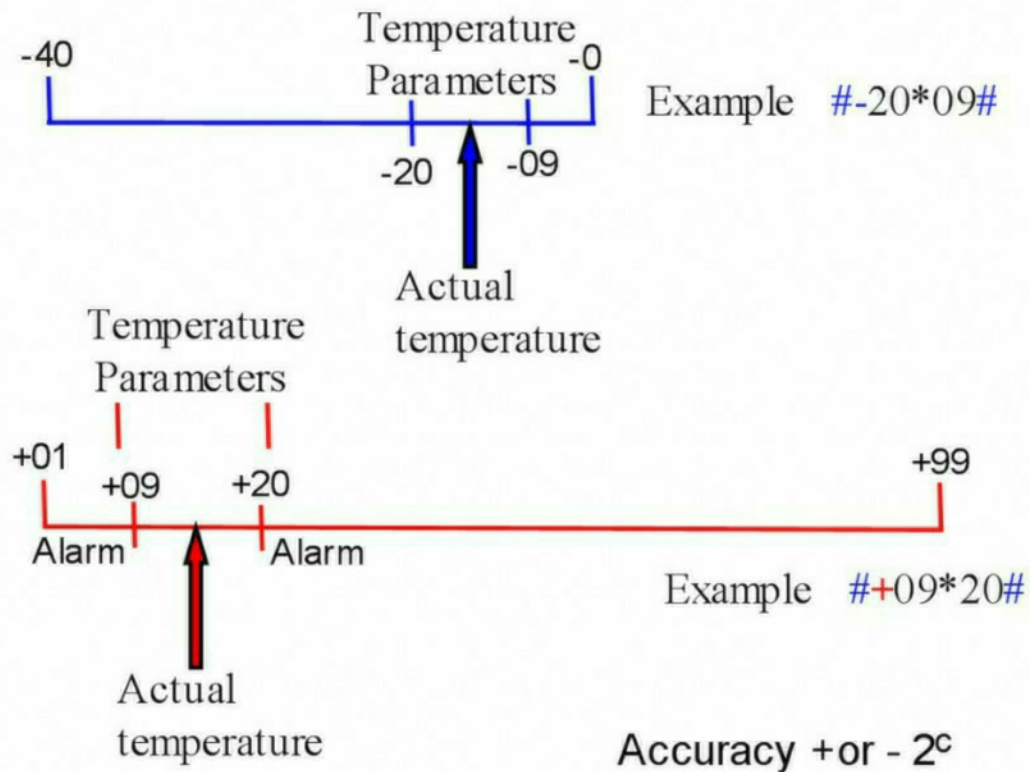
**NOTE** - The battery will only work when the battery is switched on. If you do not switch the battery switch on then the battery backup will not work. Please refer to PCB reference on page 4

## Microphone and Speaker (optional extra purchased seperately)

The unit has an onboard microphone. To activate it, make a phone call to the units number. After a few rings the call will be answered and you will be able to hear what is happening in the surroundings of the unit. To cancel this operation simply hang up.

For two way audio, that will enable you to communicate with someone in the vicinity of the unit please purchase our speaker from the accessories page on the website. This can be plugged into the side socket of the unit to enable two way conversation.

## Controlling The Temperature



The Microprocessor will scan the temperature parameters every 3 minutes, when the temperature goes outside of the temperature parameters this will generate a text alarm sent to the users indicating the current temperature and turn on relay 1.

When the temperature returns into the temperature parameters, a text will be generated to let users now temperature is normal, and relay 1 will be turned off

### Text Commands

`#+09*20#` This will save the parameter settings for plus 9 degrees to plus 20 degrees

`#-10*20#` This will save the parameter settings for minus 10 degrees to minus 20 degrees

\*NOTE YOU CANNOT MIX MINUS AND PLUS TEMPERATURES - PLEASE USE + OR - SYMBOL

`#START#` will start the temperature reading / temperature alarm

`#STOP#` will stop the temperature reading / temperature alarm

\*Note In the event of a power loss the unit will remember if it was in stop or start mode

`#TEMP#` at any time you can text this to get a temperature reading

## Quick Reference

Send Text	Operation	Acknowledgment	
#PUL=REL1#	Pulse Relay 1	Relay 1 Pulse	17 Seconds Default
#PUL=REL2#	Pulse Relay 2	Relay 1 Pulse	17 Seconds Default
#REL1=ON#	Turn Relay 1 On	Staus Report - Relay 1 On/Off, Relay 2 On/Off	
#REL1=OFF#	Turn Relay 1 Off	Staus Report - Relay 1 On/Off, Relay 2 On/Off	
#REL2=ON#	Turn Relay 2 On	Staus Report - Relay 1 On/Off, Relay 2 On/Off	
#REL2=OFF#	Turn Relay 2 Off	Staus Report - Relay 1 On/Off, Relay 2 On/Off	
#AUTO=ON#	Turn Auto Function (relay 2) On	Auto Function On	
#AUTO=OFF#	Turn Auto Function (relay 2) Off	Auto Function Off	Default
#STATUS#	Gives Status Report on Relays	Staus Report - Relay 1 On/Off, Relay 2 On/Off	
#MESS1=YOURMESSAGE#	Stores a custom message for input 1	Message 1 Stored	
#MESS2=YOURMESSAGE#	Stores a custom message for input 2	Message 2 Stored	
#MESS3=YOURMESSAGE#	Stores a custom message for input 3	Message 3 Stored	
#MESS4=YOURMESSAGE#	Stores a custom message for input 4	Message 4 Stored	
#SIGNAL#	Gives a Signal Strenth Test	Score of 1-30	
#TEMP#	Sends a Temperature check command	Temperature +?? Or - ??	
#+20*30#	Sets Temperature to Trigger at positive Temperature Selected	Relay 1 On	
#~20*30#	Sets Temperature to Trigger at negative Temperature Selected	Relay 1 On	
#STOP#	Stop Monitor Reading	Relay 1 On	
#START#	Start Monitor Reading	Relay 1 On	
#PH1=NUMBER#	Saves Contact Number 1	Number Stored	
#PH2=NUMBER#	Saves Contact Number 2	Number Stored	
#PH3=NUMBER#	Saves Contact Number 3	Number Stored	
#PH1=DELETE#	Deletes Contact Number 1	Number Deleted	
#PH2=DELETE#	Deletes Contact Number 2	Number Deleted	
#PH3=DELETE#	Deletes Contact Number 3	Number Deleted	
#CALL=ON#	Switches Text & Call Alerts on	Call on	
#CALL=OFF#	Text Alerts Only	Call off	Default
#ALARM=ON#	Sets Alarm to On	Alarm On	
#ALARM=OFF#	Sets Alarm to Off	Alarm Off	Default

## Important Installer Notes

- When installing the aerial antenna cable please ensure that the cable leaves the box by the shortest possible route and is not coiled up and left inside the box
- Do not stick the aerial onto any metal surface. This will degrade the signal strength received.
- Please remove all voicemail functions from the simcard before installing it into the Auto Dialler. All major UK network voicemail removal codes are shown on page 5
- Before commissioning, please ensure the signal strength is sufficient by sending the text message #STATUS#  
We strongly recommend you need a score of at least 10. Also try the signal using both the 2G 3G & 4G via dipswitch 1 & 2
- If you do not receive a good signal, please reposition the aerial antenna to improve the signal strength or alternatively change the network provider as signal strength can vary between providers.

For more technical support please browse the FAQ's on our website [www.gsm-activate.co.uk](http://www.gsm-activate.co.uk) or alternatively email our technical support team at [technical@gsm-activate.co.uk](mailto:technical@gsm-activate.co.uk) and we will reply or call back within 24 hours Monday - Friday.