



GSM 2G / 4G AUTO DIALLER PLUS



MODEL 2G 4G V2

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Product Information

The GSM Auto Dialler Plus is a multi purpose unit with 2G,& 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.

Specification

- GSM Frequency: Quadband Frequency 850/900/1800/1900/ ,800 /2600 Mhz
- 4G Bands : - B1, B3, B5 - B8 , B20 (other bands available on request)
- Power Supply Voltage: 9 - 24 volts DC Minimum 2 Amps
- Current Used in Standby Mode: 35 Milliamps
- Max Current: Up to 2 Amps
- Standard 2G or 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 -
- Microphone you can call into to listen to the surroundings area. -
- Mains Failure and Restore Alarm
- Battery Backup for up to 24 hours standby

PCB Reference

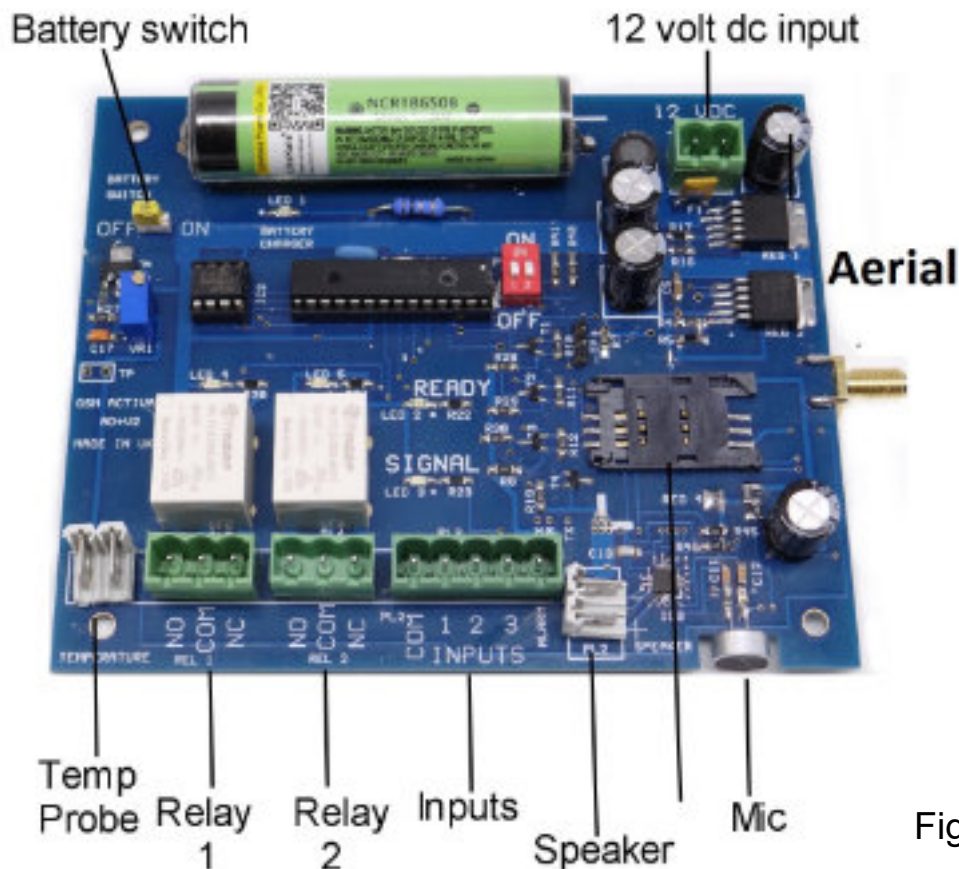


Figure 1

IMPORTANT - PLEASE READ

Please make sure you disconnect the power from the input and remove the battery link when you fit the simcard. Then place the simcard with the clipped corner facing outwards.

See image 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 is switch to on)

Dipswitch

The dialler can work on 2G & 4G networks. The module works worldwide with all simcards (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 - Dipswitch 1 Set to OFF - Unit boots up in 2G

2 - Dipswitch 1 Set to ON - Unit boots up in 4G

***Note dipswitch 2 is not used on this model**

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 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.

NOTE - We recommend doing a signal strength on 2G, 3G, and 4G (see diagram page 4) to see which frequency is strongest and then using the strongest frequency.

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 a separate hardware for temperature, mains failure and external sensing. When these are triggered the unit will call or text up to 5 preset separate numbers which can be stored on to the unit.

To programme the preset numbers you want to use, please follow the examples below by sending the text message command to the simcard within 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

#PH4=0771399512# - Stores the mobile/landline phone number as contact no: 4

#PH5=07737322565# - Stores the mobile/landline phone number as contact no: 5

A maximum of 5 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 2

#PH3=DELETE# - This deletes stored contact number 3

#PH4=DELETE# - This deletes stored contact number 4

#PH5=DELETE# - This deletes stored contact number 5

NOTE - Please send one message at a time and wait for the GSM 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.

To delete all numbers and messages stored, please send a text command

#RESET#

The Green Signal LED will flash, and the unit will reply "Factory Reset"

SIM Active Function

Our GSM Auto Dialler comes with a SIM Active function meaning that it will send a message every six weeks to a preprogrammed number we at GSM Activate own to prevent the SIM card being shut down due to inactivity.

How to Programme the (SMS) Text Message

You can now change the alarm message to one of your choosing. For example "Alarm 1 Triggered"

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

IMPORTANT PLEASE READ - You can only use a maximum of 30 characters including spaces for you customised message.

Telephone Call Alerts

The GSM Auto Dialler Plus 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 2G 4G Auto Dialler Plus 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

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

After each operation the unit will reply with the Relay Status

Pulsing the Relay by SMS Text Message

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**

Automatic Relay Triggering

The relays can be set to trigger in synchronization with an input trigger (relay 2, check page 9) or temperature trigger (relay 1, check page 11)

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 1 second. The image (at bottom of page) is a typical application of how to connect the unit to an alarm panel.

Inputs 1, 2 and 3 are constantly monitored by the Auto Dialler Plus 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 1 second. Before this can be triggered you must activate the alarm input by sending the text message command as follows. The unit will need manually activating again once triggered by a text message.

#ALARM=ON#

- This will activate the alarm if the input is pulled to ground. You will receive the text acknowledgement "ALARM TRIGGERED"

#ALARM=OFF#

- This will deactivate the alarm. Pulling the input to the ground will mean you will receive NO notifications.

Auto Relay Trigger Input (Relay 2)

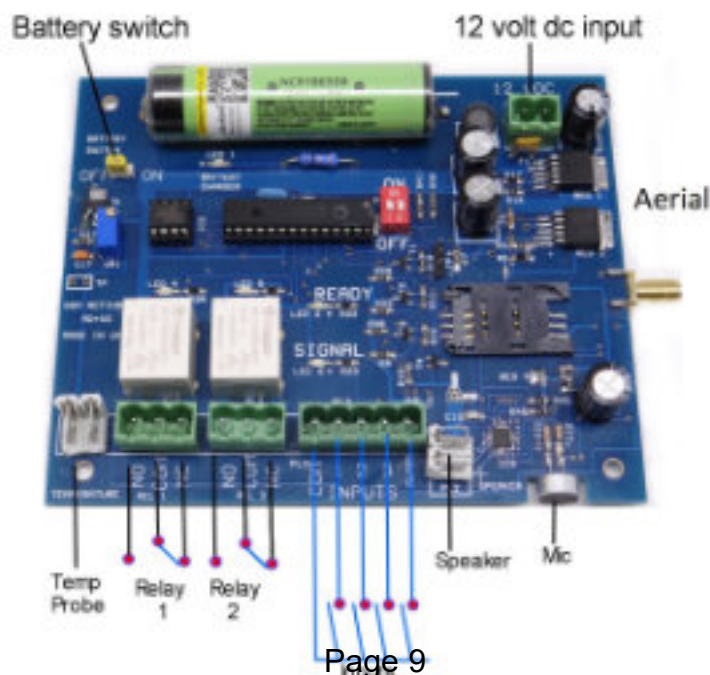
Relay 2 can be set to automatically pulse for 17 seconds when an input has been triggered. Please be aware of any conflicts this may cause if you are already using relay 2 as an independently activated relay. To turn this function on, please send the text command:

#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)



Mains Failure Alarm

By connecting to the mains power using a 9/24v power supply the Auto Dialler Plus 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

The unit will have an onboard microphone that will have the ability to be activated by a phone call. After a few rings the call will be answered and you will be able to hear what is happening within the surrounding area of the unit.

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

Adjust Speaker Volume

There are 7 levels of volume for speaker. These can be set by using the following SMS text commands

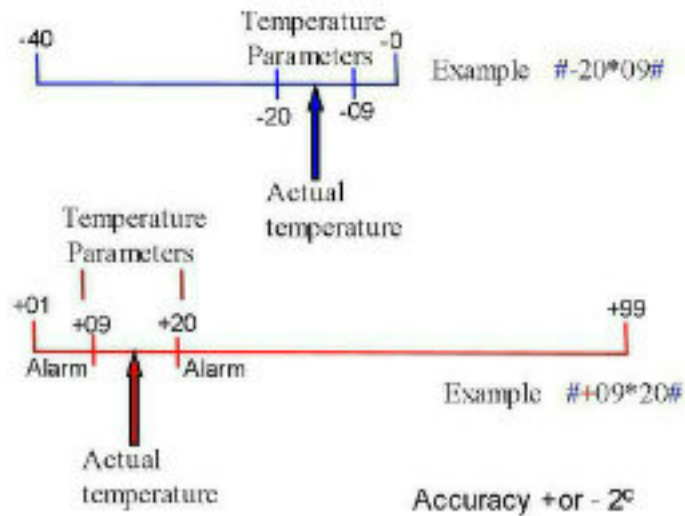
Speaker

#VOL=1# - Minimum

#VOL=4# - Default Setting

#VOL=7# - Maximum

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. When the temperature returns into the temperature parameters, a text will be generated to let users know temperature is normal

Relay 1 Temperature Trigger

Relay 1 can be set to latch on when the temperature has gone outside of the parameters. When the temperature returns inside the parameters, the relay will turn off - this can be used to trigger a siren /lighting etc. Please be aware of any conflicts this may cause if you are already using relay 1 as an independently activated relay

To turn the function on please send the SMS

#RELTEMP=ON# - This will turn the auto function on for relay 1 only

#RELTEMP=OFF# - This will turn the auto function off for relay 1 only (default setting is off)

Text Commands for Temperature Settings

#+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 - SYMBOLS

#START# - This will start the temperature reading / temperature alarm

#STOP# - This 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# - This will give you a current temperature reading

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 Plus. 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 for a good signal. Also try the signal using 2G & 4G via dipswitch 1 and using the strongest signal strength.
- 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.

Quick Reference

Send Text	Operation	Acknowledgment
#REL1=ON#	Turns Relay 1 On	Status Report Relay On/Off Relay 2 On/Off
#REL1=OFF#	Turns Relay 1 Off	Status Report Relay On/Off Relay 2 On/Off
#REL2=ON#	Turns Relay 2 On	Status Report Relay On/Off Relay 2 On/Off
#REL2=OFF#	Turns Relay 2 Off	Status Report Relay On/Off Relay 2 On/Off
#PUL=REL1#	Pulse Relay 1 (17 Seconds)	Relay 1 Pulse
#PUL=REL2#	Pulse Relay 2 (17 Seconds)	Relay 2 Pulse
#AUTO=ON#	Turns Auto Function On (Relay 2)	Auto On
#AUTO=OFF#	Turns Auto Function Off (Relay 2)	Auto Off
#MESS1=MESSAGE#	Stores Custom Message for Input 1	Message 1 Stored
#MESS2=MESSAGE#	Stores Custom Message for Input 2	Message 2 Stored
#MESS3=MESSAGE#	Stores Custom Message for Input 3	Message 3 Stored
#MESS4=MESSAGE#	Stores Custom Message for Input 4	Message 4 Stored
#VOL=4#	Set Speaker Volume from 1 - 7 (default is 4)	Volume Set
#ALARM=ON#	Sets Alarm to On (Input 4)	Alarm On
#ALARM=OFF#	Sets Alarm to Off (Input 4)	Alarm Off
#CALL=ON#	Switches Text and Call Alerts On	Call On
#CALL=OFF#	Text Alerts Only (Default)	Call Off
#TEMP#	Sends a Temperature Reading Check Command	Current Temperature
#READ=PARAMETERS#	Sends a Temperature Parameter Check Command	Current Temperature Parameters
#-20*30#	Sets a Negative Temperature Range	
#+20*30#	Sets a Positive Temperature Range	
#START#	Starts Temperature Monitoring	
#STOP#	Stops Temperature Monitoring	
#PH1=NUMBER#	Stores Number to Position 1	Number Stored
#PH2=NUMBER#	Stores Number to Position 2	Number Stored
#PH3=NUMBER#	Stores Number to Position 3	Number Stored
#PH4=NUMBER#	Stores Number to Position 4	Number Stored
#PH5=NUMBER#	Stores Number to Position 5	Number Stored
#PH1=DELETE#	Deletes Number in Position 1	Number Deleted
#PH2=DELETE#	Deletes Number in Position 1	Number Deleted
#PH3=DELETE#	Deletes Number in Position 1	Number Deleted
#PH4=DELETE#	Deletes Number in Position 1	Number Deleted
#PH5=DELETE#	Deletes Number in Position 1	Number Deleted
#SIGNAL#	Gives a Signal Strength Test	Score (1 - 30)
#STATUS#	Get a Status Report	Relay 1 on/off , Relay 2 on/off
#RESET#	Rest to Factory Settings	Factory Reset