

Sparr Electronics Limited



User Manual
SMS Alerter

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1. Overview

- SMS Alerter enables sending advance notification via SMS to avert costly breakdowns.
- It is fully secured, remote controlled, easy to configure and update via SMS commands.
- Ability to send messages to multiple recipients.
- Configurable "Event" descriptions.

2. Technical Specifications

Interface	
Interface	RS 232 (Optional Configuration Port)
Data Rates	9600
Characters	8
Parity	Even
Stop Bits	1
Flow Control	NONE
Network Interface	
Interface	GSM / GPRS
Protocols	SMS / FTP
Configuration	
Commands	SMS Commands
Trigger Inputs	
Digital	2 Inputs with dry contact
Indicators (LED)	
GSM	Green
Connect	Red
Power	
Input	8 to 24 V DC, 500 mA max
Packaging	
Dimensions(LxWxH)	(105 mm(L) x 70 mm(W) x 35 mm(H))
Weight	150g

3. Applications

- Alerting security events.
- Automation Industries.
- Preventive Maintenance Notification.
- Real-time alerts.

4. LED Indications

INDICATOR	ACTION	STATUS
CONNECT (RED LED)	OFF	Power supply not connected
	ON	Power supply connected
	SLOW FLASH ON 64 msec & OFF 3 sec	Unit is in Initializing State
	QUICK FLASH 64 msec & OFF 800msec	Unit is in Ready State
GSM (GREEN LED)	OFF	GSM not connected
	SLOW FLASH ON 64 msec & OFF 3 sec	Unit is registered on the GSM network
	QUICK FLASH ON 64 msec & OFF 800msec	Unit is not registered on the GSM network

5. Getting Started

5.1 Package Contains

Box includes:

- a. SMS Alerter Unit
- b. 12 V Power Adapter
- c. GSM Antenna

5.2 Procedures to follow

1. Insert the 12V power supply adaptor to the unit.
2. The RED LED of the unit will light up.
3. Once the preliminary check is completed, power OFF the unit to insert the SIM card.
4. The base cover is only a press fit and it can be open easily by holding the unit horizontally then open the top panel of the unit.
5. The SIM card holder can be opened by pushing the top part at the direction shown in the SIM card holder.
6. Insert the SIM card as shown in the picture, close the SIM card holder and lock it by moving the top part at the direction shown in SIM card holder.



7. Plug in the power adaptor and connect GSM Antenna, now the unit is ready to test.

Note:

- Firmware updates will require GPRS functionality. It is preferable that GPRS is there and also pretested by using it in a phone.
- The SIM card has to be a pretested and unlocked SIM.
- It is preferable that the SIM card to be tested for its ability to send and receive SMS by using in a Phone.

6. Configuring the Unit through SMS Commands

The unit can be configured through SMS commands from a master number. The commands are described below.

“All the commands are case sensitive”
“Mobile Number should always be starts with +91”

1) Set Master Number:

In order to configure the unit initially master number has to be set; the unit will only receive SMS commands and respond to the master number.

Format	Set<space>M1<space>number
Example	Set M1 +911233456789
Response	Set M1 +911233456789 OK

2) Set Recipients Numbers:

Up to 10 numbers can be set, to which the SMS Alerter unit will send preprogrammed SMS messages when it detects changes in the input.

Format	Set<space>N1<space>number	} Input 1
	Set<space>N2<space>number	
	Set<space>N3<space>number	
	Set<space>N4<space>number	
	Set<space>N5<space>number	
	Set<space>N6<space>number	} Input 2
	Set<space>N7<space>number	
	Set<space>N8<space>number	
	Set<space>N9<space>number	
	Set<space>N10<space>number	
Example	Set N1 +911233456789	
Response	Set N1 +911233456789 OK	

3) Set Messages:

A message is send when inputs state changes from LOW to HIGH or HIGH to LOW. The Message can be configured as per the requirement and the limit is 50 characters. I1 LOWHIGH, I1 HIGHLOW, I2LOWHIGH and I2HIGHLOW are the default messages.

Format	Set<space>I1LOWHIGH<space>message Set<space>I1HIGHLOW<space>message Set<space>I2LOWHIGH<space>message Set<space>I2HIGHLOW<space>message
Example	Set I1LOWHIGH LOWHIGH
Response	Set I1LOWHIGH LOWHIGH OK

4) Set Default:

This will load factory default values in to the Alerter and also allows a new master number to be set.

Format	Set<space>DEFAULT
Example	Set DEFAULT
Response	Set DEFAULT OK

5) Set Default if Master Number has been forgotten:

If the master number has been forgotten or lost by using this command we can reset the master number and will load default values.

Format	Set<space>DEFAULT 7727735328766427
Example	Set DEFAULT 7727735328766427
Response	Set DEFAULT OK

6) Check Status:

This is used to check the status of the unit.

Format	STATUS
Example	STATUS

Response	STATUS I1-HIGH I2-LOW VERSION SMS ALERT V1.23
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7) Delete Master Number:

The master number can be deleted by using this command with retaining all settings.

Format	Set<space>M1.
Example	Set M1.
Response	Set M1Clear OK

8) Delete Recipient Numbers:

Any of the numbers programmed can be blanked out by sending below commands.

Format	Set<space>N1. Set<space>N2. Set<space>N3. Set<space>N4. Set<space>N5. Set<space>N6. Set<space>N7. Set<space>N8. Set<space>N9. Set<space>N10.
Example	Set N1.
Response	Set N1 Clear OK

9) Delete Programmed Messages:

Any of the messages programmed can be blanked out by sending this command. Once this is done a message will not be sent for that change and thus only messages for the type of change required may be selected.

Format	Set<space>I1LOWHIGH. Set<space>I1HIGHLOW. Set<space>I2LOWHIGH. Set<space>I2HIGHLOW.
Example	Set I1LOWHIGH.
Response	Set I1LOWHIGH Clear OK

10) Time Stamp ON / OFF:

This command will switch the Time stamping of messages sent by the Alerter.

Format	Set<space>Time<space>Stamp<space>ON/OFF
Example	Set Time Stamp ON
Response	Set Time Stamp ON OK

11) Date Time:

The time zone is the number of 15min increments from GMT. For ex for Utah it will be -24 since Utah is - 6 hours from GMT.

Format	Set<space>DateTime<space>yy/MM/dd,hh:mm:ss+/-zz
Example	Set DateTime 16/08/15,07:10:30+25
Response	Set DateTime 16/08/15,07:10:30+25 OK

[yy=year, MM=month, dd=date, hh=hour, mm=minute, ss=second, zz=time zone]

Once the Date and Time is set manually automatic update of the time and date from the network is turned off and can now only be turned on by loading DEFAULT.

12) APN :(Access Point Name)

A mobile device making a data connection must be configured with an APN to present to the carrier. The carrier will then examine this identifier to determine what type of network connection should be created.

Format	Set<space>APN
Example	Set APN airtelgprs.com
Response	Set APN airtelgprs.com OK

13) The Check Internet

This command will allows you to test the Unit's ability to connect to the Internet (Accuracy of APN command etc).

Format	Check<space>Internet
Example	Check Internet OK
Response	Check Internet OK

14) Upgrade Firmware

The firmware of the Alerter can be updated when required, from the Internet by giving the above command. Once the update is completed the Alerter will reply with a Firmware Upgrade OK, message and load Factory Defaults.

Only for the above to function the SIM card should be an Internet enabled one and the APN (given by the Service provider) set.

Format	Upgrade<space>Firmware
Example	Upgrade Firmware
Response	Upgrade Firmware OK

15) Set Firmware Name

[Default: sparrl.com/download/firmware/Sms/sms_alert.hex] will now set the path and file name of the file which will be downloaded and programmed in to the unit on receiving an Upgrade Firmware command. Following a successful firmware upgrade unit will return an Upgrade Firmware OK command and also load Default.

Format	Set<space>Firmware<space>Name<name>
Example	Set Firmware Name sparrl.com/download/firmware/sms_alert.hex
Response	Set Firmware Name sparrl.com/download/firmware/sms_alert.hex OK

16) Set Server Name

A Server is computer or device on a network that manages network resources.

Format	Set<space>Serve<space>ip/domain name
Example	Set Server 192.64.85.132
Response	Set Server 193.64.85.132 OK

17) Clear Server Name

Server can be blanked out by sending following Command.

Format	Set<space>Server.
Example	Set Server.
Response	Set Server Clear OK

18) Remote Port Number

A port number is a way to identify a specific process to which an Internet or other network message is to be forwarded when it arrives at a server.

Format	Set<space>Remote<space>Port<space>port number
Example	Set Remote Port 8080
Response	Set Remote Port 8080 OK

19) Clear Remote Port Number

Remote Port Number can be blanked out by sending following Command.

Format	Set<space>Remote<space>Port.
Example	Set Remote Port.
Response	Set Remote Port Clear OK

20) Set Server Path

The "Server Path" specifies the directory/folder on your server that will hold the data sent from SMS Alerter.

Format	Set<space>Path<space>server path
Example	Set Path /TestServer/sparrServlet?
Response	Set Path /TestServer/sparrServlet? OK

21) Clear Server Path

Path can be blanked out by sending following Command.

Format	Set<space>Path.
Example	Set Path.

Response	Set Path Clear OK
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22) Set Device ID

A device ID (device identification) is a distinctive number assigned to the unit. The following command is used to set the Device ID. This is 16 bit wide.

Format	Set<space>Device<space>ID<space>device id
Example	Set Device ID MwAEGJMA12345a
Response	Set Device ID 00MwAEGJMA12345a OK

23) Clear Device ID

Device ID can be blanked out by sending following Command.

Format	Se<space>Device<space>ID.
Example	Set Device ID.
Response	Set Device ID Clear OK

24) Set Authentication

Authentication is a process in which the credentials provided are compared to those on file in a database of authorized users' information on a local operating system or within an authentication server. If the credentials match, the process is completed and the user is granted authorization for access. The following command is used to set the Authentication. This is 32 bit wide.

Format	Set<space>Authentication<space>authentication id
Example	Set Authentication 00asdfghjklzxcvbnmasdfghjklqw5555G
Response	Set Authentication 00asdfghjklzxcvbnmasdfghjklqw5555G OK

25) Clear Authentication

Authentication can be blanked out by sending following Command.

Format	Set<space>Authentication.
Example	Set Authentication.
Response	Set Authentication Clear OK

26) Set Data post

This command allows setting the data posting method. If the format is OK the Unit will return a Set Datapost SMS OK.

Format	Set <space>Datapost<space>SMS/HTTP/BOTH
Example	Set Datapost SMS
Response	Set Datapost SMS OK

27) Clear Data Post

Data post can be blanked out by sending following Command.

Format	Set<space>Datapost.
Example	Set Datapost.
Response	Set Datapost Clear OK

28) Set Data Server Response

Server response can be set by using this command.

Format	Set<space>Server<space>Response<space>Message
Example	Set Server Response DATA STORED
Response	Set Server Response DATA STORED OK

29) Clear Server Response

Server Response can be blanked out by sending following Command.

Format	Set<space>Server<space>Response.
Example	Set Server Response.
Response	Set Server Response Clear OK

30) Set SMS/CALL/BOTH

This command allows you to set SMS/CALL/BOTH for particular number by sending the command.

Format	Set<space>N1<space>SMS/CALL/BOTH Set<space>N2<space>SMS/CALL/BOTH Set<space>N3<space>SMS/CALL/BOTH Set<space>N4<space>SMS/CALL/BOTH Set<space>N5<space>SMS/CALL/BOTH Set<space>N6<space>SMS/CALL/BOTH Set<space>N7<space>SMS/CALL/BOTH Set<space>N8<space>SMS/CALL/BOTH Set<space>N9<space>SMS/CALL/BOTH Set<space>N10<space>SMS/CALL/BOTH
Example	Set N1 SMS
Response	Set N1 SMS OK

7. COMMANDS

SL NO	SMS Format	Description	Default Value
1	Set<space>M1<space>number	Sets Master Number	NULL
2	Set<space>M1.	Delete Master Number	

3	Set<space>N1<space>number Set<space>N2<space>number Set<space>N3<space>number Set<space>N4<space>number Set<space>N5<space>number Set<space>N6<space>number Set<space>N7<space>number Set<space>N8<space>number Set<space>N9<space>number Set<space>N10<space>number	Sets Recipients Numbers	NULL
4	Set<space>N1. Set<space>N2. Set<space>N3. Set<space>N4. Set<space>N5. Set<space>N6. Set<space>N7. Set<space>N8. Set<space>N9. Set<space>N10.	Delete Recipients	
5	Set<space>I1LOWHIGH<space>message Set<space>I1HIGHLOW<space>message Set<space>I2LOWHIGH<space>message Set<space>I2HIGHLOW<space>message	Set Messages	I1 LOWHIGH, I1 HIGHLOW, I2LOWHIGH I2HIGHLOW
6	Set<space>I1LOWHIGH. Set <space>I1HIGHLOW. Set<space> I2LOWHIGH. Set<space> I2HIGHLOW.	Delete Messages	
7	Set<space>DEFAULT	Set Default	
8	Set<space>DEFAULT<space>7727735328766427	Default loading if Master Number has Forgot/Lost	
9	STATUS	Check Status	
10	Set<space>Time<space>Stamp<space>ON/OFF	Sets Time Stamp ON/OFF	Enable
11	Set<space>DateTime<space>yy/MM/dd, hh:mm:ss+/-zz	Sets Date & Time	
12	Set<space>APN<space>Name	Set APN Name	
13	Upgrade<space>Firmware	Update Firmware	

14	Set<space>Firmware Name<space>Firmware Name	Set Firmware Name	sparrl.com/download/firmware/Sms/sms_alert.hex
15	Check<space>Internet	Check Internet	
16	Set<space>Server<space>ip/domain name	SetsServer Name	NULL
17	Set<space>Server.		
18	Set<space>Remote<space>Port<space>port number	SetsRemote Port Number	8080
19	Set<space>Remote<space>Port.		
20	Set<space>Path<space>server path	Sets Server Path	/?
21	Set<space>Path<space>server path.		
22	Set<space>Device<space>ID<space>device id	SetsDevice ID	16 Zero's
23	Set<space>Device<space>ID.		
24	Set<space>Authentication<space>authentication id	Sets Authentication	32 Zero's
25	Set<space>Authentication.		
26	Set<space>Datapost<space>SMS/HTTP/BOTH	Sets Data post	SMS
27	Set<space>Datapost.		
28	Set<space>Server Response<space>server response	Sets Data Server Response	DATA STORED
29	Set<space>Server Response		
30	Set<space>N1<space>SMS/CALL/BOTH Set<space>N2<space>SMS/CALL/BOTH Set<space>N3<space>SMS/CALL/BOTH Set<space>N4<space>SMS/CALL/BOTH Set<space>N5<space>SMS/CALL/BOTH Set<space>N6<space>SMS/CALL/BOTH Set<space>N7<space>SMS/CALL/BOTH Set<space>N8<space>SMS/CALL/BOTH Set<space>N9<space>SMS/CALL/BOTH Set<space>N10<space>SMS/CALL/BOTH	Set SMS/CALL/BOTH for Particular Number	SMS

8. Troubleshooting

9. Frequently Asked Questions

Problems	Solutions
1) If the device is not able to send the SMS Alert	Check GSM antenna connected properly Check SIM Card inserted properly Make Sure enough currency is available to send SMS Check GSM LED is ON for 64msec and OFF for 3 sec
2) If the device is not detecting the input	Check the digital inputs are connected properly
3) If the device is unable to Configure	Ensure Master number is configured correctly and verify SMS commands are being sent from the master mobile

10. Frequently Asked Questions

Questions	Answers
1) How to SET MASTER NUMBER?	Set< space >M1<space>Number
2) How to RESET MASTER NUMBER?	Set<space>DEFAULT 7727735328766427 If Master number is forget or lost, by sending this command master number can be deleted from any mobile hand set.
3) How to SET DEFAULT values?	Set<space>DEFAULT All parameter values are loaded into default values.
4) How to send a message along with Date and Time?	Set<space>Time<space>Stamp<space>ON [Default: enable] date & Time will be sent in SMS along with the message
5) How to DELETE a number?	Set<space>M1. It makes master number into null.
6) How to SET RECIPIENT NUMBER?	Set N1 number Set< space >N1<space>Number

11. Contact and Support

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