

VOLTS returns the value of the supply voltage and hence the state of the battery.

CREDIT returns the outstanding credit available to the pre-payment phone with the unit. Once the credit falls below £2 an alarm notification will be given automatically to give opportunity to top up credit and incidentally uses remaining credit twice as fast.

LISTEN causes the unit to make a voice call so that it is possible to listen to what is happening at the alarm location. After 2 minutes the call will automatically finish in case the call is diverted. Terminating the call with the receiving phone can be done in the normal way.

CH. This is a very powerful command allowing any command or message to be customised. For instance **CH AUX ON OPEN SESAME** will change the **AUX ON** command to **OPEN SESAME** which might be appropriate for a garage door. This command needs using with some thought as it is possible to end up with two identical commands. If this happens the unit will always respond to the one that appears first in its internal processing list and the second one will be ineffective. The solution is to use the **CH** command to change the operating command to something different and then work from there.

Additional Tips

The unit detects when the phone switches to another cell and will send a **MOVED** alarm when the alarm is set the first time it detects a change of cell. This can cause a false alarm when the power is switched off and on again with the alarm set. To re-enable this feature on demand just send the **SET ALARM** message again.

Once happy with the operation of the unit it is advisable to change the phone settings so that no alert tones are made on receipt of an incoming message or on the receipt of an incoming phone call so that attention is not inadvertently drawn to the unit.

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Peace of Mind

Mobilarm Model 2001 Instructions





Mobilarm Model 2001

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STATUS queries the health of the units power supply and will return **OK** or **LOW BATT** if the supply voltage is low.

ALARM STATUS queries whether the alarm is set or clear.

WHERE obtains information on the location of the phone. This is not as good as a GPS location but if you can talk to the right person at your service provider is able to identify the cell the phone is using and therefore its position probably within a mile.

LOW BATT ON turns on notification of the low battery warning.

LOW BATT OFF turns off notification of the low battery warning.

LOW SIG ON turns on notification of low signal strength at the phone.

LOW SIG OFF turns off notification of low signal strength at the phone.

PASSWORD - Sending this message followed by the current password gives any mobile phone access to the unit by placing the calling phone's number in location 1 (overwriting any number already stored there). The mobile phone will be subsequently recognised as an authorised phone. If there is no notify number (when the unit is new) this will also be automatically set to the calling mobile phone's number when the **PASSWORD** command is used with the current password.

Using **PASSWORD** followed by a space and the current password, a space and a new word will change the current password to the new word entered.

BELL ON turns on the bell circuit and energises whatever is connected to the bell terminals. After 20 minutes this circuit will automatically switch off.

BELL OFF turns off the bell circuit.

AUX ON turns on the aux circuit and energises whatever is connected to the aux terminals. This circuit stays on until it is turned off as there is no time-out.

AUX OFF turns off the aux circuit.

BELL AUTO ON - sending this command makes the bell circuit operate when an intruder is detected (just like a conventional alarm). If a bell is connected this will operate for 20 minutes or until turned off by the **BELL OFF** command and hopefully scare off the intruder.

BELL AUTO OFF stops the unit operating as a conventional alarm and puts the bell circuit entirely under manual control.

where **YOUR NEW WORD** is the new password you want to use. This must be between 5 and 15 characters long.

You can now operate the alarm by sending **SET ALARM** and **CLEAR ALARM** messages to the unit. When armed the LED on the Mobilarm unit will flash and when clear the LED will be steadily illuminated.

You should now be able to explore the functionality of the unit by using the commands in the following section.

Commands

The commands below are the default commands of the unit. Each command can be customised by the user to suit the circumstances of use and the user's convenience. All the messages are shown in Uppercase but the unit is not case sensitive.

SET ALARM puts the unit into the alarm notification mode so any intruders will be detected and notified. Sending this message receives the confirmation message **ALARM SET**.

CLEAR ALARM puts the unit into a quiescent state so the boat or equipment can be used. Sending this message receives the confirmation message **ALARM CLEAR**.

ALARM STATUS queries the state of the system and returns either **ALARM SET** or **ALARM CLEAR**.

PHONE2 - Sending this message followed by a space and a mobile phone number gives access to the system from the mobile with this number. This allows you to give relatives or friends access to the alarm system. Sending this command and a number will overwrite any previously stored phone number in location 2.

PHONE3 - Sending this message followed by a space and a mobile phone number gives access to the system from the mobile with this number. This allows you to give relatives or friends access to the alarm system. Sending this command and a number will overwrite any previously stored phone number in location 3.

NOTIFY - Sending this message followed by a space and a mobile phone or pager number makes the unit send all alarm (and tamper etc) notifications to that mobile phone or pager.

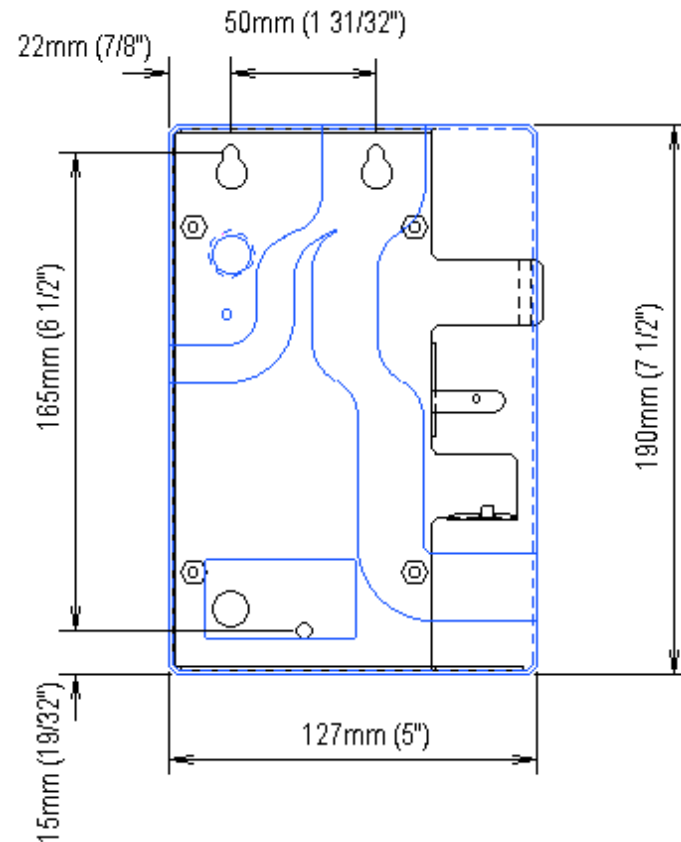
VOICE NO - Sending this message followed by a space and a mobile phone or fixed phone number makes the unit place a voice call to that phone as part of the alarm notification. You can then hear what is happening at the alarm site.

Installation

Before starting installation the Nokia 5110 mobile phone supplied with the Mobilarm unit must be fitted with its SIM card, charged and registered in accordance with the network operator's and manufacturer's instructions. Undo the 4 screws retaining the cover and remove the cover taking care to unhook the cover from the chassis lug on the right of the unit. Fit the phone in the clip on the right of the unit and plug in the data and charger leads. The release button of the data lead must be to the right of the unit

The Mobilarm model 2001 is designed to run from a nominal 12 or 24 Volt DC supply such as a car battery or two in series.

The Mobilarm Unit measures 127mm (5") wide x 190mm (6 1/2") high x 52mm (2") deep and can be mounted to a wall by three 5mm or No6 fixing screws as shown in the drawing.



Position the top two screws so they are nearly done up and hook the unit over the heads of the screws. Fit the third screw to retain the unit to the wall.

Remove the two fuses from the circuit board and connect the 12 or 24 Volt supply with the correct polarity to the left hand terminal block.

Connect any circuits such as bell, siren or beacon to the bell terminals. The polarity of the supply from the terminals is shown. Alternatively this circuit can be used to drive a bilge pump, gate/garage door drive motor or similar possibly through a relay depending on the size of the load as the output only has a 10 amp capability.

Connect further controlled circuitry to the auxiliary terminals again observing polarity and using a relay if needed. This might be used to start and stop an auxiliary generator on a boat or remotely turn a heating/lighting system on and off.

Connect normally closed proximity or pressure mat sensors in the alarm loop in series across the two alarm terminals. If a PIR detector is used this must be powered directly from the supply and its output must drive toward the positive rail when movement is detected. The output signal must be connected to the alarm loop terminals to cause an alarm on detection of movement. Alarm notification is only sent if the system is set in the alarm mode.

If the unit is used as a dialler with an existing alarm system the existing bell output needs to drive the alarm loop towards the positive rail either directly or through a small relay.

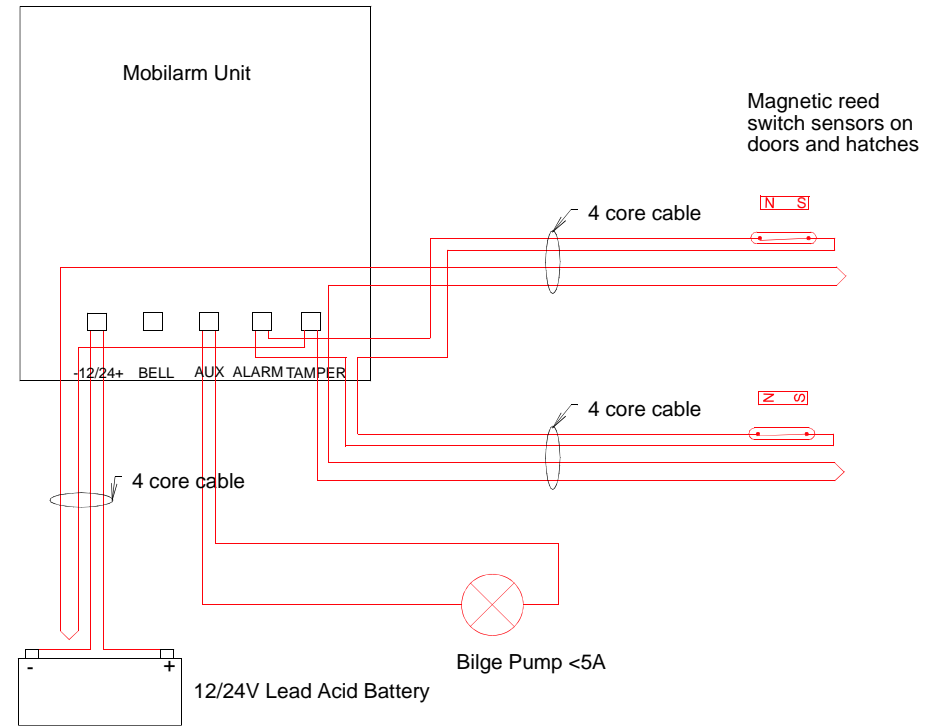
The unit's supply can be taken from the boat battery or an existing alarm's standby battery as the consumption is low (typically 10 mA for normal operation and 250mA when charging the phone).

The tamper alarm loop should form a closed loop between the tamper terminals. The tamper wires should run as closed loops through the wiring to the detectors and possibly through the supply wiring. Any short to the alarm circuit will cause either an alarm or a tamper alarm. Any break in the tamper loop will cause a tamper alarm. A tamper alarm will be notified whether the alarm system is set or not. A timer on the tamper alarm only allows further notification every 20 minutes to minimise the annoyance of an intermittent wiring fault.

Removing the cover operates the microswitch on the circuit board producing a tamper alarm.

When the wiring is complete replace the two fuses on the circuit board making sure the fuse with the thicker fuse wire (10A) is fitted to the right hand position. The LED should be illuminated steadily. Hook the front cover over the right hand lug and carefully replace the front cover taking care the LED passes through its hole. Refit the 4 retaining screws.

The Mobilarm unit should now be ready to be used.



A typical electrical installation

Quick Start

Use the mobile phone that will be used to normally operate the alarm unit and send the following message to the phone in the Mobilarm unit. (You will need to know its phone number to operate it in future.)

PASSWORD MOBILARM

Sending this message registers your mobile phone with the Mobilarm unit and automatically sets your phone as the alarm notify and voice call number.

To check your phone is now registered send the message **STATUS** and obtain a reply message.

For security you now need to change your password so send the message:

PASSWORD MOBILARM YOUR NEW WORD