GERONIMO ANALOGUE HEAVY DUTY TELEPHONE

Installation and Connection Instructions

1.0 Introduction

Background

This guide is designed to help you to install, program and wall mount the Geronimo Analogue Heavy Duty Telephone and to connect it to the public switched telephone network, or to a compatible private branch exchange.

2.0 General

The Geronimo range of heavy duty telephones are designed for use in courtesy, or security applications. The all steel construction, combined with an engineering thermoplastic handset provide a durable phone capable of with standing repeated use, by a wide variety of customers.

Geronimo can be programmed to offer a number of features to the user, these are:

2.1 Single Number Auto Dialer
Geronimo can be programmed so that when the handset of the phone is lifted, it will automatically dial a pre-programmed number (after a few seconds); like a "hot line" telephone.

The number is programmed into the "off hook" memory store.

2.2 Four Memory Keys
Geronimo has four one touch memory buttons (red yellow, green and blue). The user can lift the handset and one of the four memory keys can be pressed, to dial one of four stored numbers.

These memory buttons can also be used in conjunction with the off hook memory store, so if the user lifts the handset and does not press any button, then after a few seconds, the number programmed into the "off hook" memory will dial.

2.3 Barring or Enabling the Twelve Button Telephone Keypad
Geronimo also has a twelve button telephone keypad (0 - 9, * and #). The keypad can be programmed to operate in one of several ways:

Enabled - Users will be able to dial any telephone number from the keypad. Remember the cost of these calls will billed to the service operator, who pays the telephone line costs.

Barred - Users will be unable to dial from the keypad. They will still be able to dial numbers programmed into the memory stores (the four memory keys and the off hook memory). Using keypad barring with the memory stores will ensure that users are only able to dial the numbers the service operator wishes to permit.

Restricted - Geronimo can be programmed to allow users to dial telephone numbers starting with certain number prefixes from the keypad, for example if Geronimo was used in a hotel lobby you might allow extension numbers beginning with 2 to be dialed to call the guest's rooms, but not numbers beginning with 9 which would contact an outside line. If you want to program Geronimo with Restricted Dialing from the keypad, please contact Kalika.

The four memory keys and the off hook memory can be used in conjunction with the 12 button telephone keypad.

2.4 Supervisor Memory Store
Geronimo also has three additional memory stores which can be accessed by pressing the * key, entering a six digit PIN number and pressing key 1, 2 or 3.

These memory stores can be used, for example, by security or cleaning staff to contact a particular number to say they have reached a particular location or have finished cleaning certain area near the Geronimo phone.

If you want to program and use the Geronimo the Supervisor memory Stores, please contact Kalika.

2.5 Standard Programming

Your Geronimo is shipped to you with no restriction to the dialing and no numbers in the memory stores (working much like a regular telephone).

To change the programming of this Geronimo from these settings (program numbers in to the memory stores, allow or bar the use of the twelve button keypad, set up simple reporting) you can use the Geronimo Voice+ interactive, voice guided, programming system on 0845 388 3527 (*see Section 3*)

If you need more sophisticated programming changes (set up the supervisor memory stores, set up Restricted Dialing from the keypad, change Operating Modes) then please contact Kalika Ltd.

2.6 Operating Modes and Fraud Prevention

Several features are built in to Geronimo to prevent fraudulent calls from being made; these are:

2.6.1 The microphone of Geronimo is turned off until a memory store, or a few digits from the keypad, have been dialed. This is to prevent a dishonest user attempting to set up a call by using an MF Tone Pad (a hand held dialing device, with its own keypad, held close to the microphone of the telephone).

Without the muting of the microphone at the start of the call, this user, with a tone pad, could make calls to any telephone number at the expense of the service operator

2.6.2 The * and # keys cannot be dialed until a call is established. This will prevent a fraudulent user from making use of any short codes, or feature codes, which may be programmed into a Private Branch Exchange (if Geronimo is connected to a PBX), or from removing any network call barring restrictions on a BT line (if Geronimo is connected to a BT line).

Again this protection is designed to ensure that only the numbers which the service operator wants to be dialed, can be dialed.

2.6.3 The keypad is disabled on incoming calls. Some frauds (known as "ring back" frauds), involve a user calling into the Geronimo (from say his, or her, mobile phone), answering the call at Geronimo, and then hanging up the call at the mobile. This will usually cause dial tone to be returned to the Geronimo and if the keypad was enabled the user could call the world at the service operator's expense. Thus we disable the keypad on incoming calls.

2.6.4 Pressing the cradle switch (or replacing the handset in the cradle) does not of itself disconnect the phone line, it signals to Geronimo's micro processor to break the line, which it does in a controlled way for a fixed period of time. This is to avoid what are known as "hook flash" frauds, where a short depression of a telephone hookswitch (and momentary disconnection of the phone line) can be used to invoke a registry recall and return dial tone to the user, without commencing a new call. Without this protection frauds could be committed where the user makes a second call (not subject to the dialing restrictions programmed at the phone) because they are able obtain dial tone in the middle of a call.

These anti fraud features are set by the Operating Mode programmed on Geronimo. It is possible to disable these anti fraud features if they cause any problems with your particular service by changing the Operating Mode setting. It is also possible to enhance the security, for example it is possible to program Geronimo in a different Operating Mode, such that when the initial call is set up it is not possible to dial any further digits from the keypad.

Please contact Kalika if you want to change the Operating Mode or disable, or enhance, these anti fraud features.

3.0 Geronimo Voice+ Programming

3.1 General
It is possible to program, or reprogram, the Geronimo memories and settings, quickly and easily using the Geronimo Voice+ Programmer.

This is an intelligent, voice guided, interactive system, which you call from the Geronimo you want to program and it will lead you through the process of programming Geronimo, allow you to enter your desired memory telephone numbers (and confirm and correct them if necessary), bar or enable the telephone keypad, and set up "Simple Reporting" which will enable your Geronimos to call a telephone number you designate, on a regular basis, to let you know they are in good working order, on a working line, and able to provide a telephone service to your customers.

To use the Geronimo Voice+ programmer you need to ensure that your are calling from the Geronimo you want to program and you need to know its unique six digit serial number (USN). This number is printed on a label inside Geronimo, a label on the CD case of this User Guide, and is also on the outside of the carton in which your Geronimo was shipped. If you do not not know the USN, or if you enter it incorrectly, the Geronimo will not be programmed by the system.

3.2 Features which can be programmed
The following features can be programmed by the Geronimo Voice+ Programmer

Memories
You can program a telephone number into the "on hook" memory store (this number will be dialed a few seconds after the handset is lifted), you can also program telephone numbers into the four coloured memory buttons (red, yellow, green and blue memories). The telephone numbers can be between two and sixteen digits long and if you do not want to program a number into a particular memory, just press the * key, when prompted, to skip to the next setting.

When entering a telephone number which you want to be programmed into a memory if you press the # key when you have completed the number entry, then the Geronimo Voice+ programmer will respond to you more quickly, as it will know you have finished entering your number.

Twelve Button Keypad
You can disable the twelve button keypad to ensure that your customers can only dial the service numbers you have programmed into the memories, or you can leave it enabled to allow your customers to dial any number.

If you disable the twelve button keypad you will not be able to dial back into the Geronimo Voice+ programmer to make programming changes and you need to contact Kalika to restore your Geronimo to it's factory settings (which can be done remotely).

Simple Reporting
You can arrange for your Geronimo(s) to make a reporting call every day, or every week, to let you know that it is good working order, and is connected to a working phone line and able to provide a telephone service to your customers. This "I'm OK" report feature is particularly useful if your Geronimo is located at some distance from you (and difficult to monitor in person) or if it is important that you should know that your Geronimo telephone service is continuously available to your customers.

The "I'm OK" reporting call can be made to any telephone number which you have available to you; this can be a mobile line, or land line. The call made from the Geronimo does not need to be answered (and if you do not answer, then there will be no cost associated with the reporting call). The telephone line which
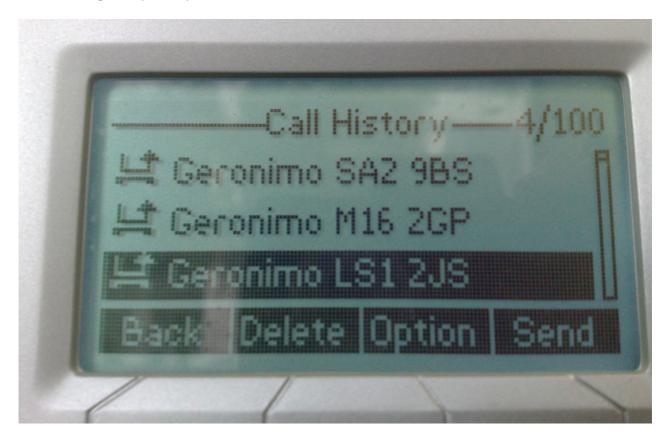
you are reporting to should have caller display facility enabled (this service is free on residential BT land lines if you sign up for "BT Privacy at Home" feature) and is included by all mobile operators, if you are using a mobile line and phone. The phone connected to the line should have a caller display capabilities allowing it to receive and remember the phone numbers of the calling lines (this will include most landline phones with a display and all mobiles), or you can use a separate caller display unit.

When your Geronimo makes it's "I'm OK" report it will ring your line for a short while (calling either every day, or every week) and then hang up. By checking the callers list at your phone (once a day, or once a week depending on the reporting frequency of the Geronimo phones) you can see when Geronimo made it's call (the date and time) and its phone number.
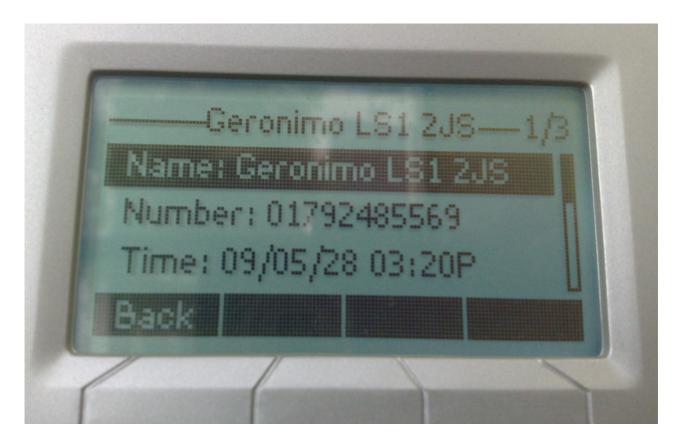
You can make it easier to associate the Geronimo phone number with a particular Geronimo phone by storing an "address book" entry into the mobile, or regular phone, you are using. You could use the Geronimo USN, or it's location, as the NAME entry, and the telephone number to which it is connected as the NUMBER entry.

Thus when you are checking the Callers list you will more easily recognise the Geronimos which have called in to report to you they are OK.

Caller Display phone showing reports from three Geronimos and their Post Codes

and the time and date of the report

Detail of the report showing time and date of the call and the originating phone number

If a Geronimo does not call in to report "I'm OK" when it should, this indicates a line, or equipment problem, which is preventing Geronimo from providing telephone service to your users.

3.3 Using the Geronimo Voice+ system to program your Geronimo
From the Geronimo phone you want to program dial

<div align="center">

0845 388 3527

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Listen to the spoken instructions and key entries when requested. When you have set up all of the features you want to use, Geronimo Voice+ will program your phone. This will take around 45 seconds and you can hear the programing in the handset.

You will need to know the USN of the phone you are programming.

If you are reprogramming a Geronimo make sure your re-enter all of the desired memory numbers and settings.

There is a Programming Template overleaf which may help you to plan the programming of your Geronimo and make sure you have all the important details to hand before you dial into the Geronimo Voice+ system.

Unique Serial Number

[ ] [ ] [ ] [ ] [ ] [ ]

The USN is printed on a label inside the phone, on the CD case and on the phone carton

Memories

*Press * to leave a particular memory empty and move on to next memory*

🔴 [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][#]

Red Memory Store (number between two and sixteen digits, # to enter)

🟡 [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][#]

Yellow Memory Store (number between two and sixteen digits, # to enter)

🟢 [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][#]

Green Memory Store (number between two and sixteen digits, # to enter)

🔵 [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][#]

Blue Memory Store (number between two and sixteen digits, # to enter)

[ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][#]

"Off Hook" Memory Store (number between two and sixteen digits, # to enter)

Keypad Disable [0] Enabled [1] Disabled

Reporting [0] No Reports [1] Reporting

[ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][#]

Reporting Telephone Number (number between two and sixteen digits, # to enter)

Reporting Frequency [0] Off [1] Every Day [7] Every Week

4.0 Wall Mounted Installation

The Geronimo range is designed for secure wall mounted installation. Geronimo has three slot apertures provided on the rear case for screw fixing to the wall. A printed wall mounting drilling template is provided with the installation CD ROM. This will assist in drill hole positioning.

Suitable screws and fixings (not supplied) should be selected. The selection of fixing will depend on the surface to which Geronimo is being fixed. These may include screws and wall plugs, wood screws, "rawl" bolts, or plaster board fittings. The shank diameter of the screws, or "rawl" bolts, used should not exceed 5 mm (which will allow up to a No. 10 size screw to be used)

The slot apertures allow upwards and sideways movement to compensate for any misalignment of the screws which would prevent the unit from being horizontal.

4.1 Wall Mounting the Case Top

To fix the case top to the wall requires that the case top be separated from the Geronimo chassis. The case top is secured to the chassis by four socket "button head" screws at the bottom of the sides of the Geronimo. These should be released with an Allen key of suitable dimensions (2.5 mm) to remove the M4 socket screws.

When all four screws are removed the chassis can be slid down from the case top by pushing on the handset cradle. There is sufficient length on the internal handset cable to allow for the separation of the the case top (to which the handset is fixed) and the Geronimo chassis (where the internal handset cable is plugged in).

M4 securing screws being released with Allen Key

The handset may also be disconnected from the base unit by disconnecting the RJ11 handset plug from the handset socket (at the side of the black cover) which will allow you to completely separate the case top and chassis assembly.

The case top should be fixed to the wall using the selected secure fixings. Adjustment can be made for alignment of the case to to the horizontal by taking advantage of the movement facilitated by the slots.
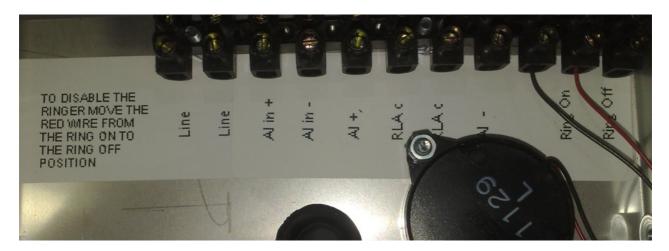
If Geronimo is likely to be subject to moisture ingress we strongly recommend that the exposed area of the slots be sealed using a suitable mastic, or sealant, to preserve the environmental integrity of the cabinet.

5.0 Connecting the Telephone Line

5.1 Line Connection

Geronimo is designed for hard wired connection to the public switched telephone network, or a compatible analogue extension of a private branch exchange. The connection needs only two wires as an internal ringer capacitor has been provided in the design. A semiconductor transient suppressor is also provided for surge, and over voltage protection. The polarity of the line connection is unimportant and Geronimo may have either line terminal connected to the a or b polarity of the local telephone line.

An internal screw block connector allows for the connection of the telephone line. Connection of the line terminals should be at the extreme left positions (1 and 2) of the block which are labeled *Line* in the base of the phone.

Internal connector block showing phone line connections at the left

The telephone cable can be threaded through the hole at the bottom of the chassis either by removing the rubber blanking plug, or piercing a hole in the blanking plug to allow the cable to exit . An IP 68 rated cable gland is available where environmental sealing is needed. This cable gland will provide both environmental sealing and mechanical anchorage for the cable. The gland is rated to environmental standard IP68 and will accommodate a cable diameter in the range 4.5 - 10 mm. Please contact Kalika Ltd. for details.

The cable can also be take through one of the slots on the rear of the case

When the connection to the line is properly made you should be able to hear dial tone in the handset (assuming the handset is connected). It is important to ensure that the telephone line wires insulation is carried into the connector block opening such that no uninsulated wire is visible. This ensures isolation requirements are met.

5.2 Reassembly

When the case top is fitted to the wall and the line cable connected, the chassis and case top should be reassembled.

First reconnect the handset plug if this has been disconnected.

Carefully align the chassis front plate with the runners in the case top and slide it to the closed position. You may need to apply some pressure to the base tray of the chassis to fit it fully into the case top and you will need to make sure the holes on the case top are aligned with the screw fittings in the chassis to ensure that the socket screws can be re fitted easily. Refit the socket screws.

Some internal and external views of Geronimo are shown overleaf to familiarise you with the parts of the product.

Geronimo Case Top and Handset

Geronimo Chassis (internal view)

Geronimo Assembled

6.0 Alarm Connectors

Geronimo is provided with an alarm input connection and an alarm output connection. These are electrically isolated from the telephone line and from the user and may be interworked with a wide variety of alarm equipment. They can be used in several ways.

6.1 Alarm Input

The alarm input allows an external alarm event to trigger a call to the Geronimo Management System.

The alarm device, when active, should provide a voltage in the range 1 to 20V with a current capability of greater than 1 mA. This voltage should be applied at the positive and negative alarm inputs (3rd and 4th connectors on the terminal block for positive and negative connections respectively).

A momentary voltage will trigger the alarm condition and the alarm will be reset to the idle state after the Geronimo has successfully made a call to the Geronimo Management System to inform it of the alarm event.

6.2 Alarm Output

The alarm output needs to be provided with an external DC power supply to drive it's internal relay. This supply should have a voltage of 12V DC and a current capability of 100 mA. The positive and negative connections from the supply should be connected to the 5th and 8th connectors on the connector block.

The 6th and 7th connectors provide a pair of isolated relay contacts with a 1A current rating which are closed when the alarm output is active. This not intended to switch mains voltage loads, The maximum voltage on the contacts should be less than 60V DC or 42V peak AC and should be current limited to a safe level.
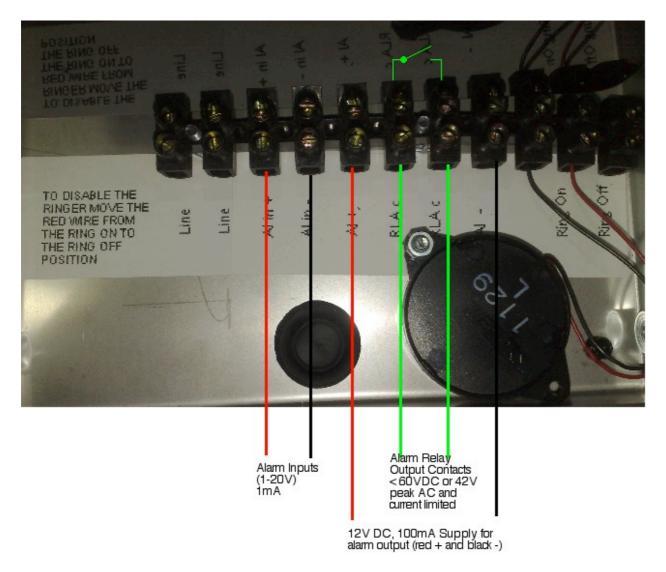
The alarm output can be programmed by the Geronimo Management System (or at the factory) to work in one of two modes. These are:

6.2.1 Follow Alarm Input

The alarm output can follow the alarm input. That is if the alarm input is active the alarm output relay will be closed and can operate a siren, klaxon or light to provide an audible, or visual, local indication of the alarm event, as well as the standard remote report to the Geronimo Management System

6.2.2 Follow Ringing.

The alarm output follows ringing on the telephone line. Thus in noisy areas a loud bell, klaxon, or light can be controlled and give an indication of an incoming call at Geronimo.

Internal connector block showing alarm in and out connectors

6.3 Connections

The alarm connections are shown above. The cable connecting to the alarm devices should be inserted through the cable exit hole.

It is important to ensure that the alarm wires insulation is carried into the connector block opening such that no uninsulated wire is visible. This ensures isolation requirements are met.

7.0 Drain Hole

Geronimo is provided with a removable drain plug in the chassis base tray (at the rear on the left). If necessary this can be levered out with a small electrical screwdriver to allow any trapped liquid to flow from the inside of the unit.

Drain Plug

8.0 Disabling the Ringer

If Geronimo is not required to indicate incoming calls then the ringer can be disabled. To disable the ringer move the red wire from the *Ring On* position on the connector block to the *Ring Off* position on the connector block.

To enable the ringer again move the red wire back to the *Ring On* position

9.0 Approvals and EC Declaration of Conformity

Geronimo is designed for compliance with the following relevant standards and specifications

EN60950:2000
EN 55022:1998 and Am1: 2000 and Am2: 2003
EN 55024:1998 and Am1: 000 and Am2: 2003

We, Small Planet Technology, under our sole responsibility declare that the product below complies with the requirements of the Low Voltage Directive 72/23/EEC as amended and the Electromagnetic Compatibility Directive 2004/108.

Product Geronimo Secure Telephone

Product Category Information Technology Equipment

Year of affixation of CE Marking 2007

J Churchman
Technical Director, Small Planet Technology Limited

Swansea, UK

1st November 2007