



Slave/Help Point Slave/Help Point with rear enclosure 3 button Help Point

HELP POINT and SLAVE HELP POINT

Environmentally Dedicated
Weather Resistant Telephones

Types

- Help Points - **One, two and three button with Emergency Override**
- Slave Help Points - **One, two and three button with Emergency Override and External Audio Input**

USER GUIDE



These are

products

Tel: +44 (0)1283 500 500

Fax: +44 (0)1283 500 400

E-mail: sales@gai-tronics.co.uk

Web: <http://www.gai-tronics.co.uk>

The policy of GAI-Tronics is one of continuous improvement, therefore the Company reserves the right to change specifications without notice

At a Glance

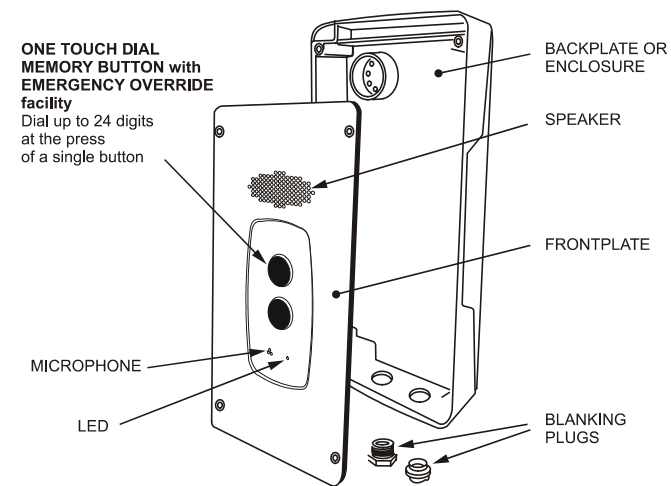


Figure 1 – Help Point at a glance

Technical Data

The Help Point family of telephones is fully electronic, ruggedised and weather resistant. They incorporate many features found on modern commercial telephones and provide hands free loudspeaking communications such as intercom on a PBX switch or can be coupled directly to the telecom network.

Help Point and Slave Help Point are flush or surface mounted and designed to be fixed to a vertical surface by vandal resistant tamperproof screws. The combined key pad and faceplate is weather resistant and depending on suitable interface sealants, has an IP rating of IP65 from the front and to a minimum of IP54 from the rear. The internal components are protected by a weather resistant enclosure behind the faceplate.

Incoming calls are indicated by a flashing LED and audible warble tone.

Call termination can either be through button depression, automatic time out or remote command.

Ringer operation is selectable either at installation or as remote programming.

Models Available

All models can be configured to be fully compatible with most PABX's or PTT networks. Loop disconnect (LD) and tone dialling (DTMF) systems are internally selectable, as are a variety of recall systems, timed break recall (TBR) and earth loop recall (ELR).

1, 2 or 3 Button Autodiallers

These models are programmable with numbers up to 24 digits. A microphone muting facility guards against unauthorised calls made with a portable MF tone pad.

All Models

- All solid state. No moving parts.
- Tested to IP 65.
- Powered from the telephone line (if >30mA) and additionally from power supply for inductive coupling.
- Ringing tone electronically generated.
- Fully weather resistant.
- Supplied equipped for wall mounting. Pole-side and post-top mounting accessories available.
- Timer fitted as standard.

Safety

Low Voltage Directive

Safety requirements are imposed by the relevant national requirements that implement the Low Voltage Directive (73/23/EEC), and articles 4(a) and 4(b) of Directive 91/263/EEC.

All connections to the telephone should be isolated elsewhere before opening the outer case.

Lightning

For increased lightning protection, connect a local earth to the terminal block. (If this is being used as a PBX signalling EARTH, consult with the PBX supplier before proceeding).

Bell Tinkle

GAI-TRONICS telephones may cause bell tinkle if connected in parallel with other telephones using a 2-wire connection system.

Related Standards and Regulations

Safety Testing to: EN41003 and EN60950

EMC Testing: compliance with EN55022, EN55024, EN50293

Radiated Emission: EN55022

Radiated Immunity: EN55024

Immunity for Road Traffic Signal Systems: EN50293

Weight and Protection Rating

Weight: 1.1Kg

Degree of Protection: IP65 - dependent on installation.

Compliance



This mark indicates compliance with the European R&TTE Directive 1999/5/EC.

GAI-Tronics has been assessed and approved by BAPT as a listed production facility for simple and feature telephones.

Optional feature



This mark indicates compliance for inductively coupling to Hearing Aids having a 'T' switch position in accordance with the relevant Ofcom Code of Practice

Tested to ETS 300-381 and in accordance with CCITT P37.

"This equipment has been designed for pan-European single terminal [CTR21] connection to the Public Switched telephone Network (PSTN). However, due to differences between the individual PSTN's provided in different countries, this does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point.

Note: This product has not been assessed for Loop Disconnect / Pulse dialling, any use of this facility is not guaranteed.

The Help Point and Slave Help Point models of telephone are suitable for connection to a PABX that returns secondary proceed indication.

Any other usage of GAI-Tronics telephone will invalidate the warranty of the telephone, if as a result it then ceases to conform to the standards against which testing was performed.

It cannot be guaranteed that the telephones will operate correctly under all conditions of connection to PBX's.

In the event of problems, you should contact your equipment supplier in the first instance.

Connection Factor

The connection factor provides a guide as to the maximum number of pieces of equipment (both in the idle state and for call detection) that can be connected in parallel to a telephone line. The sum of the connection factors for the individual pieces of equipment connected to a telephone line shall always be less than or equal to 5.

Some lines may not be capable of supporting this number of terminal equipment, please consult with network/PBX supplier first.

The Help Point and Slave Help Point GAI-Tronics telephones have a Connection Factor of 1,0.

Commissioning

Suitability for use

GAI-TRONICS telephones are suitable for connection to the following types of telephone line.

- Direct PSTN
- PABX Exchange
- Manual Exchange
- Private System

Connection may **NOT** be made to:

- Payphone extension
- Shared service (party) lines.

Using with a PABX Exchange

GAI-TRONICS telephones are compatible with Timed Break and Earth Recall exchange systems.

Pre-Installation

The Help Point and Slave Help Point telephones are to be connected by hard wiring - (unlike a normal plug and socket on internal telephones). Because of this, extra precautions must be observed.

In the United Kingdom, where the extension wiring, is not owned by a network provider as may be the case with a PBX/PABX, then connection may only be made by either the network provider or by the authorised maintainer of the PBX/PABX, unless the authorised maintainer has been given 14 days written notice that connection is to be made by another person and that period of notice has expired.

Warning Label

On autodial telephones, if one of the numbers is not the 999 or 112 Emergency Services, the Warning Label provided should be attached close to the dial pad.

Dimensions

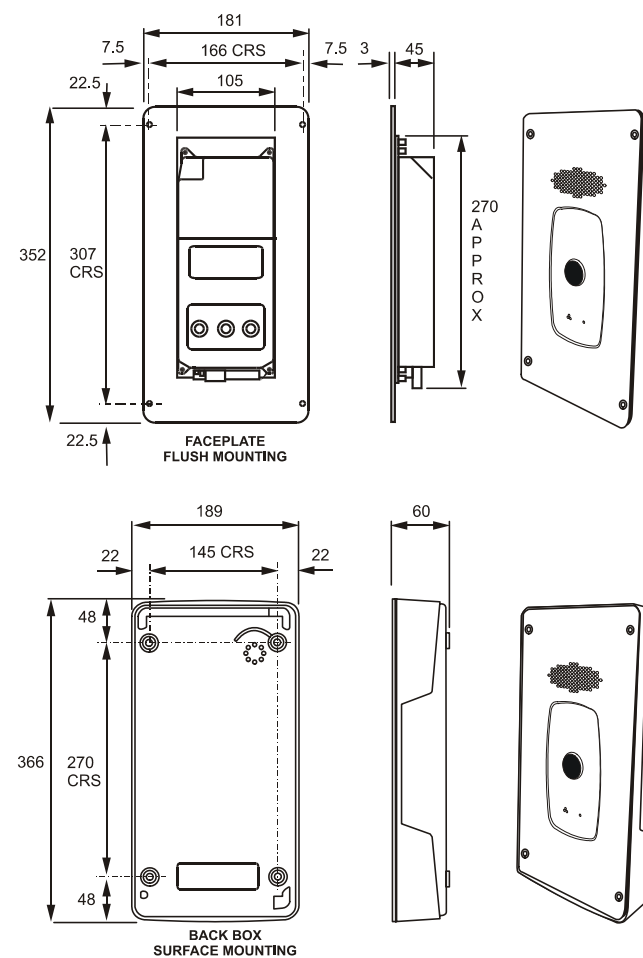


Figure 2 - Help Point Dimensions

Installation

Vertical Surface or Wall Mounting

As supplied, the telephone is only suitable for vertical surface mounting.

The following parts are included in the standard installation kit:

- x2 - cable glands with sealing washers
- 4 - No12 round head wood screw - 38mm long
- 4 - wall plugs
- 1 - 3mm socket wrench

Flush Mounting Dimensions

To enable the telephone to be flush mounted, an aperture of 110mm wide x 270mm high and at least 45mm deep must be provided in the mounting surface.

The following parts are included in the Flush Mounting Installation Kit:

- 4-Resist Torx button head screws 38mm long.
- 4-SupaDriv round head wood screws 38mm long
- 4-Wall plugs

Method

1. Place the telephone on the mounting surface so that the plastic rear enclosure is centralised within the aperture and ensuring there is sufficient room for the external power supply if required.
2. Ensure that the front plate is correctly aligned and mark through

3. Remove the telephone and drill four holes in the mounting surface to the appropriate depth to suit the best possible method of fixing with either of the following:
 - ⇒ Brick/masonry - using masonry drill No14 (7mm dia.)
 - ⇒ Wood - use 2.5mm dia drill.
4. Remove the plugs from the PCB on the rear of the front plate and connect the individual wires from the cable to it, in accordance with the connection options given previously.
5. Reconnect the plugs to their sockets on the PCB, and install the front plate onto the vertical surface using the fixing screws supplied.

Note: If the Resist Torx screws are used to provide a greater degree of vandal resistance, a special driver can be obtained from GAI-TRONICS, Part No. 612-03-0036-000.

The holes are arranged in a rectangle, as follows -

- Horizontal separation of centres :166 mm
- Vertical separation of centres :307 mm

the upper and lower pair being about 23 mm from the top and bottom edge of the unit.

IMPORTANT

The Help Point telephones have a minimum rating of IP54.

However, depending upon the surface to which it is being fitted, IP65 can be achieved by using the GAI-TRONICS supplied gasket.

Fixing details flush mounting, see Figure 2 - Help Point Dimensions.

Rear Enclosure Mounting Dimensions

Four M6-clearance holes in the enclosure allow it to be screwed or bolted to a wall, or to mounting accessories -

- Type 100-02-0081 for pole-side mounting
- Type 100-02-0054 for post-top mounting.

Fixing details with rear enclosure mounting, see Figure 2 - Help Point Dimensions

The holes are arranged in a rectangle, as follows -

- Horizontal separation of centres:145 mm
- Vertical separation of centres: 270 mm

the upper and lower pair being about 48 mm from the top and bottom edge of the unit.

1. Place the telephone on its rear surface on a firm horizontal surface.
2. Open the cover; release the front plate from the rear enclosure by unscrewing the four captive screws using a 3mm socket wrench provided.

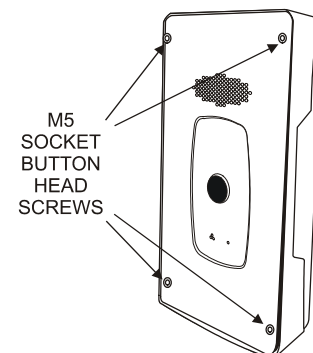


Figure 3 - Releasing the front plate

3. Remove the **RED** blanking plug from the cable entry hole leaving the **YELLOW** plug in situ.

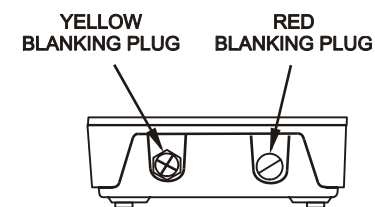


Figure 4 - Gland fitting

4. Select the appropriate sized cable gland provided:
 - Use the smallest gland for cables diameters 4 - 7mm.
 - Use the largest gland for cable diameters 8 - 13mm.

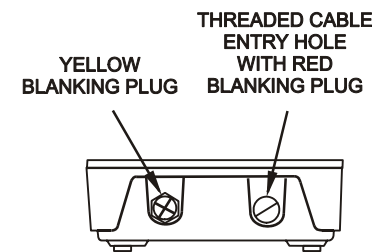


Figure 5 - Threading the cable

5. Insert the selected gland into the threaded cable entry hole and tighten using a 19mm A/F spanner, so that its sealing washer is compressed against the enclosure surface.

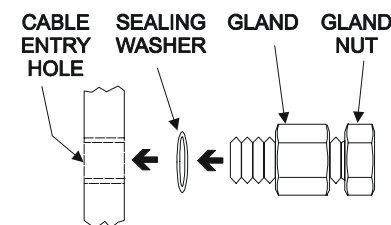


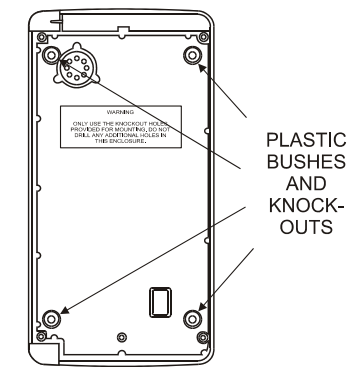
Figure 6 - Tightening the gland

6. Using a suitable tool to create the mounting holes needed by punching through the centre of the plastic flanged bushes fitted to the back wall of the rear enclosure.

WARNING:

Your warranty will be invalidated if :-

1. Any fixing hole made in the rear enclosure is left unused.
2. Any additional holes are drilled into the telephone enclosure.



IMPORTANT:
ENSURE THAT ALL BUSHES ARE IN PLACE

Figure 7 - Knocking out plastic bushes

7. Ensuring that the cable entries are at the bottom, offer the rear enclosure up to a vertical surface and mark through the punched holes. Do not use the back plate as a template to drill the holes, work only from the marked positions. Be careful not to damage the plastic washers.

8. Drill the required number of holes in the vertical surface to the appropriate depth to suit the best possible method of fixing with any of the following:

- ⇒ Brick/masonry - Use masonry drill No 14 (7mm dia)
- ⇒ Wood - Use 2.5mm dia. drill.
- ⇒ Steel (clearance hole) - Use 6.5mm dia. drill.
- ⇒ Steel (tapped hole) - Use 5.0mm dia. drill and tap M6.

9. Ensure that all four plastic flanged bushes are in place and the rear enclosure is screwed tightly to the surface to prevent any water incursion through the punched holes.

IMPORTANT: DO NOT use countersunk head fixing screws. Only use either round head, hexagon head or pan head screws provided.

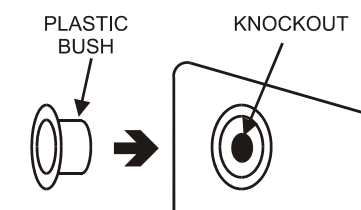


Figure 8 - Plastic bush knockout

10. Insert the cable through the gland body and screw down the gland nut sufficient to clamp the cable and make a seal.

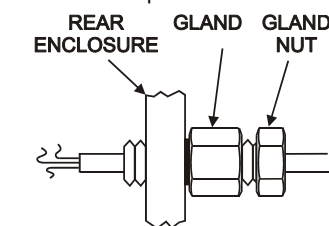


Figure 9 - Gland assembly

11. Remove the plugs from the PCB on the front plate - see Figure 11 - Plug to socket connection

12. Connect the individual wires from the cable to it, in accordance with the connection options given in - Figure 10 - Connection for Slave Audio 100V Input and Enable.

Note: Conductor sizes to be 0.5mm²-2.5mm² (flexible cable);0.5-4.0mm² (solid cable) The terminal block can be disconnected from the circuit board for easier installation

Cabling must not infringe European Low Voltage Directive (LVD) No. 73/23/EEC.

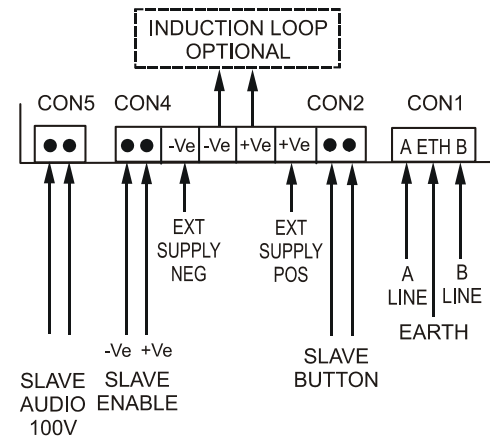


Figure 10 – Connection for Slave Audio 100V Input and Enable

13. **Programming** - To program memory buttons and Autodiallers, please refer to Programming of All Versions below.
14. Offer the front plate to the rear enclosure, connecting the plugs to their sockets on the PCB and fasten the front plate to the rear enclosure by tightening the 4 button head screws to no more than **maximum torque of 2.5 Nm**

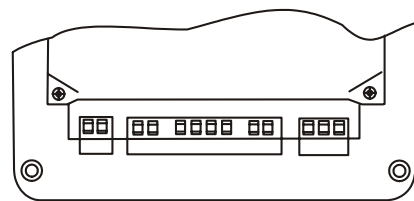


Figure 11 – Plug to socket connections

Flush Mounting

To enable the telephone to be flush mounted, an aperture of 110mm wide x 270mm high and at least 45mm deep must be provided in the mounting surface.

The following parts are included in the Flush Mounting Installation Kit:

- 4-Resist Torx button head screws 38mm long.
- 4-SupaDriv round head wood screws 38mm long
- 4-Wall plugs

Method

1. Place the telephone on the mounting surface so that the plastic back box is centralised within the aperture and ensuring there is sufficient room for the external power supply if required.
2. Ensure that the front plate is correctly aligned and mark through the four corner holes.
3. Remove the telephone and drill four holes in the mounting surface to the appropriate depth to suit the best possible method of fixing with either of the following:
 - Brick/masonry - using masonry drill No14 (7mm dia.)
 - Wood - use 2.5mm dia drill.
4. Remove the plugs from the PCB on the rear of the front plate and connect the individual wires from the cable to it, in accordance with the connection options given previously.
5. Reconnect the plugs to its socket on the PCB, and install the front plate onto the vertical surface using the fixing screws supplied.

Note: If the Resist Torx screws are used to provide a greater degree of vandal resistance, a special driver can be obtained from GAI-Tronics, quoting Part No. 612-03-0036-000.

Pole Mounting

Kit No 100-02-0208-001

For mounting telephones on to the side of round poles of 100mm to 200mm diameter, or on to square or rectangular section uprights of 100mm to 150mm across the mounting surface.

Banding straps (large-scale worm drive clamps) are not included in this kit and must be obtained separately. For details of where these may be obtained call GAI-Tronics.

For flat mounting on surfaces greater than 150mm across, use the Vertical Surface or Wall Mounting method.

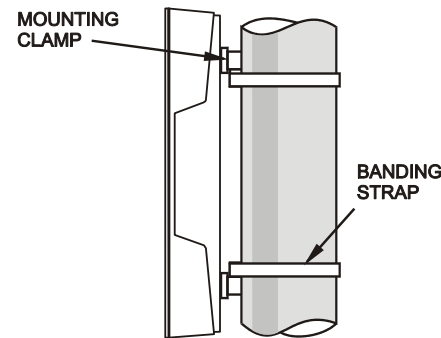


Figure 12 – Pole mounting

Disassemble the telephone as described in - Vertical Surface or Wall Mounting.

1. Punch through the flanged bushes in the rear enclosure - taking care to note the **IMPORTANT** advice in - Vertical Surface or Wall Mounting, regarding extra holes and warranty invalidation.
2. Attach the pole mounting clamp assemblies to the rear enclosure using the M6 x 25 screws provided - see Figure 12 – Pole mounting.
3. Make the necessary connections.
4. Secure the telephone front plate to its rear enclosure.
5. Offer the complete telephone up to the required mounting location.
6. Pass a proprietary banding strap round each of the pole mounting clamps and support pole.
7. Tighten the straps firmly and trim off any excess band material. For additional security the driving head of the band may be sawn off.
8. Connect and test the installation.

Post Mounting

Kit No 100-02-0209-001

For mounting telephones onto the top of 2 inch (50.8mm) diameter posts.

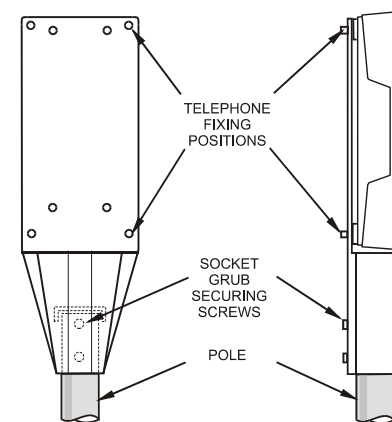


Figure 13 – Post mounting

1. Slacken the socket grub securing screws at the base of the

bracket (3mm socket wrench required) and locate it on top of support post.

2. Tighten both screws firmly so that the post is seated against the internal walls of the bracket. Ensure that approximately 200mm of cable emerges from the top of the post.
3. Remove the telephone front plate from the rear enclosure as described under - Vertical Surface or Wall Mounting.
4. Offer the rear enclosure into position on the bracket with cable passing through the entry gland.
5. Pass about 150mm of cable through the gland and tighten it firmly on to the cable.

Note: The cable gland must be fully tightened before the rear enclosure is secured to the mounting bracket, as there is insufficient access to the gland afterwards.

6. Attach the base to the mounting bracket using the four M6 x 25 screws supplied (5mm socket wrench required).

Testing

1. Press (one touch memory) dial button and listen for an exchange dial tone.

If no dial tone is present:

2. Check the telephone line connections are correctly made at the terminal block.
3. Press dial button again and check that the dial tone has ceased.

To Make a Call

1. Press dial button

The appropriate number will then be dialled.

2. Arrange for the called party to ring back to check the LED and the electronic ringing (a shrill warble tone).

If applicable:

3. Check with the appropriate monitoring station that the integrity link is indicating correctly.

Operation

To Manually Make a Call

1. Press dial button and wait for the dial tone.

The appropriate number will then be dialled.

To Receive a Call

When the telephone rings:

1. Press dial button and speak to the caller.

Maintenance

Under normal operation the telephone is maintenance free. If a fault should occur, it is recommended that the telephone be returned to GAI-Tronics for repair or service.

Cleaning

- Clean the faceplate and key pad with a soft cloth and warm water.
- **DO NOT** use high pressure water hoses.
- **DO NOT** use solvents.

Lithium Battery (optional)

Under normal operation, the telephone is maintenance free, except for the lithium battery (in certain versions) which requires renewing after ten years or so.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the

manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Programming All Versions

Introduction

The telephone can be programmed by the following methods.

- Method 1** Locally - covering the microphone aperture of the front plate with the tone pad.
- Method 2** Remotely - using a tone dialling telephone.
- Method 3** Remotely - using a modem linked computer. For further information, contact GAI-Tronics Customer Services.

Programming Procedures

Common Problem Entering Command Strings

Before commencing to enter the command string, it might be advantageous to mentally run through the procedure and clearly write down the programming command string before proceeding. The reason for this is that whilst entering a command string it is important to enter the digits at a steady pace. Leaving a small time gap of more than 2 seconds will cause a time-out of the programming procedure. This is indicated by hearing a 'beep' tone transmitted from the SMART telephone before the final '#' of the command string has been sent.

If the 'beep' tone is heard after the final '#' then programming has been successful.

IMPORTANT - READ THE ABOVE FIRST

Method 1 - Using a tone pad

1. Press ON button of the telephone to be programmed.
2. Listen for a dial tone in the speaker.
3. Place the tone pad over the microphone on the front plate.
4. Enter the Access PIN code using the tone pad (factory set at **0000 - see To Change the Access PIN Code) and wait for return tones (if return is not heard dial PIN code again).
5. Enter the command digits using the tone pad (Memory button 3 for example - *103 0123 456789 #).
6. Listen for a 'beep' in the speaker after the '#' to confirm that the command has been accepted (if no beep is received re-enter the command digits).
7. On completion of programming enter *99

Method 2 - Using a tone dialling telephone

1. Lift the handset of the tone dialling telephone.
2. Dial the number of the telephone to be programmed.
3. Listen for the ringing tone in the handset ear piece.
4. Listen for the telephone to auto-answer after 'x' rings (number of rings can be programmed) with a 'beep' in the handset ear piece.
5. Cancel auto-answer ringing by pressing '****'.
6. Enter the Access PIN code using the tone pad (factory set at **0000 - see To Change the Access PIN Code) and wait for return tones (if return is not heard dial PIN code again).
7. Enter the command digits (Memory button 3 for example - *103 0123 456789#).
8. Listen for a 'beep' in the ear piece of the handset after the '#' to confirm that the command was accepted (if no beep is received re-enter the command digits..)
9. Enter command digits *99 upon completion of programming to

close down the telephone.

10. Replace the handset.

Programming Commands

Note: All programming commands can also be used during speech calls.

To Change the Access PIN Code

To access the telephone for initial programming, the factory set PIN code 0000 must be entered.

1. Enter the command **0000.

To change to the new PIN code.

2. Enter command *30????#, where ??? is the new PIN code.

Example: Programming Requirement	Command Digits
To change the PIN code to 1234	*301234#

To Programme Memories

Memory	Command Digits	Required number	End
Memory 1	*101	Number	#
Memory 2	*102	Number	#
Memory 3	*103	Number	#
Memory 4	*104	Number	#
Memory 5	*105	Number	#
Memory 6	*106	Number	#
Memory 7	*107	Number	#
Memory 8	*108	Number	#
Memory 9	*109	Number	#
Memory 10	*110	Number	#

Example: Programming Requirement	Command Digits
Program Memory 3 with number 0123 456789	*103 0123 456789#

To Read Memories

Memory	Command Digits	Required number
Memory 1	*001#	Tones of number in Memory 1 in the speaker/ear piece
Memory 2	*002#	Tones of number in Memory 2 in the speaker/ear piece
Memory 3	*003#	Tones of number in Memory 3 in the speaker/ear piece
Memory 4	*004#	Tones of number in Memory 4 in the speaker/ear piece
Memory 5	*005#	Tones of number in Memory 5 in the speaker/ear piece
Memory 6	*006#	Tones of number in Memory 6 in the speaker/ear piece
Memory 7	*007#	Tones of number in Memory 7 in the speaker/ear piece
Memory 8	*008#	Tones of number in Memory 8 in the speaker/ear piece
Memory 9	*009#	Tones of number in Memory 9 in the speaker/ear piece
Memory 10	*010#	Tones of number in Memory 10 in the speaker/ear piece

Note: A pause command can be entered into the number to be dialled by entering command digits *1. (a pause = 0.9 seconds. Multiple pauses may be entered to increase the pause time in multiples of 0.9 seconds).

Example: Programming Requirement	Command Digits
Program Memory 1 with number 9 pause 123	*101 9 *1 123#

Maximum Number Length

The maximum number of digits that can be entered into a memory is 24 (twenty four). This includes any pause commands (*1, or Special Feature Commands) which may have been included.

Other Commands

Programming Requirement	Command Digits	Explanation
Programming Time-out	*50 ???#	Where ??? is value from 6 to 255, where 6 = 60 second intervals & 255 = 2550 seconds intervals Factory set at 7 minutes (42=420 seconds).
Programming Number of Rings Before Answer	*70 ??#	Where ?? is value of number of rings Factory set at 5 rings. Range: 0 to 15.
Programming Telephone Dial and Recall Mode	*730# *731# *733#	LD - dialling EL recall MF - dialling EL recall MF - dialling TB recall - default
Mute Before Dial	*740# *741#	Mute Before Dial OFF Mute Before Dial ON - default
Programming a Memory Button to be Recall	*???*0#	Where ??? is command digits of required memory

To Programme Telephone Time-out

The time-out is the length of time starting from pressing the ON button, that is allowed for speech calls before the telephone 'cuts-out'.

This can be set from 60 seconds to 2,550 seconds (42.5 minutes) in 10 second intervals.

Example: Programming Requirement	Command Digits
1. Set time-out to 300 seconds (5 minutes)	*50 30#
2. Set time-out to 1200 seconds (20 minutes)	*50 120#

To Programme Number of Rings Before Answer

The number of rings before answer can be set from 0 to 15 rings.

Example: Programming Requirement	Command Digits
1. Set number of rings to 5	*70 5#
2. Set number of rings to 10	*70 10#

To Programme a Memory Button to be Recall

To program a memory as a Recall button, enter command digits *0.

Example: Programming Requirement	Command Digits
Program Memory 3 as a Recall button.	*103*0#

Special Features

The telephone has four other special features:

1. Dial a Memory number in LD (pulse) when the telephone is configured in DTMF (tone) = Programming command: *2*1.

Example: Programming Requirement	Command Digits
Memory 1 to dial 123456 in LD	*101*2*1 123456#

2. Dial a Memory number in DTMF (tone) when the telephone is configured in LD (pulse) = Programming command: *3*1.

Example: Programming Requirement	Command Digits
Memory 3 to dial 123456 in DTMF	*103*3*1 123456#

3. Dial DTMF (tone) characters ABCD in Memory number = Programming command:
*4 = 'A'
*5 = 'B'
*6 = 'C'
*7 = 'D'.

Example: Programming Requirement	Command Digits
Memory 2 to dial 1234ABCD	*102 1234*4*5*6*7#

4. To change the Send and Receive levels, please contact GAI-Tronics Telephone Customer Services.