RISCO GROUP

Creating Security Solutions. With Care.

GT490X Control Panel

Engineer's Reference Guide

CONTENTS

IMPORTANT!

Input:	**AC230V +/-10% ~50Hz 125mA Max. 35W Max**
Nominal Temp Range:	**0 - 50ºC**
Humidity	**70% non-condensing**
	**GT490X Metal** **For Indoor Use Only**

This equipment is intended only for use as a Security Alarm Control Panel. Adequate ventilation away from heat and humidity must be provided. The unit must be fixed securely to a non-flammable surface using suitable fixings.

All mains wiring must conform to the relevant current IEEE wiring regulations (or appropriate international regulatory standards). See Mains Supply Connection section within this manual for more detailed instructions.

All wiring must be protected from sharp or jagged edges.

All low voltage (alarm) wiring must be to the appropriate international regulatory standards and comply to good wiring practice and should be routed away from the mains cables.

Replacement fuses should be of the same type and rating conforming to IEC 127. The GT490X Control Panel is fitted with resettable fuses. The areas protected are Battery, Aux and Keypad. In the event of a fuse tripping or an input/ output not working, remove the source of the load and check wiring for shorts. Check any added devices for full functionality before any reconnection.

The maximum current draw from the unit for all output combinations **must not exceed 1A.**

Sounders, detectors and other auxiliary items, including the control panel and keypad(s), should be included when calculating current drawn by the system.

Any damage caused through overloading the Control Panel Supply will not be covered by the warranty.

We recommend that additional power supplies are used to supply detectors on long cable runs.

The unit is intended for use with a suitable re-chargeable lead acid battery permanently connected to the appropriate terminals.

All documentation and manuals must be thoroughly read by suitably qualified installation personnel prior to installation.

⚠ **Important Safety Information. Hazardous Voltages Inside.**The unit has no user serviceable parts inside. No User Access. Internal access should only be by suitably qualified personnel.

The unit MUST be Earthed. It is the responsibility of the installation engineer to ensure that the earth connection to the unit lid is good on completion of the installation or after service.

1 INTRODUCTION

The GT490X Control Panel is a microprocessor based unit that has been designed to be suitable for all types of domestic and commercial installations. All zones are fully programmable by the engineer.

On power up / reset, the Control Panel can be set to the old BS or EN2 (Grade 2) operating standards. ***It is ESSENTIAL that a 4 6 YES NO reset is done to all new systems before commencement of programming.***

Upon completion of the installation the engineer may, if required, re-program several factory set options so as to tailor the Control Panel to suit the requirements of the system.

The GT490X Control Panel uses 32 character LCD Remote Keypads for control of the system via User Code(s) and programming of the system via an Engineer Code. The Factory Default Codes are:

Default Master User Code	5678
Default Engineer Code	1234

The Engineer code may be 'Locked' into the system during engineer programming and it should be noted that if the 'Locked' code is not known the only way to have it returned to the factory default is to return the PCB to the factory.

Option Formats. When an option cannot be changed the display will show a **:** rather than the usual **=** sign. Pressing the No key is disregarded and the panel will react as though the Yes key has been pressed (i.e. it will move onto the next option).

2 SYSTEM INSTALLATION - WIRING

Planning the Control Panel Location

Consideration in locating the fixing position of the Control Panel should be given to:

Access for the routing of cables for the system from detection devices, sounders (internal and external), remote keypads, mains, etc.

The position of the underside retaining screw.

The fixing of a 3 amp fused spur with disconnection facility.

When fitting the RKP(s) consideration should be given to:
Operation of the keypad.

Readability of the display.

The Panel should be fixed to the wall using appropriate wall plugs and No.8 screws at least 30mm long. Do not tighten the screws at this stage, wait until all your wiring is in place.

Wiring Considerations

With the exception of the mains wiring all interconnections should be made with multicore 7/.02 alarm cable.

Good wiring practice should be observed throughout the installation and the following tips may prove useful.

Never run alarm cables parallel to mains cables, telephone cables or any other cables that may be carrying inductive loads

Whenever you have to cross mains cables with alarm cables ensure that you do so at 90°

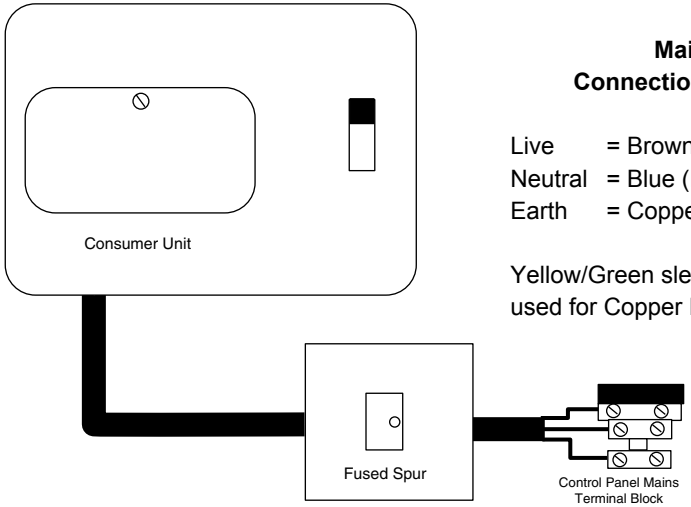
Whenever possible wire the mains connection for the control panel back to the consumer unit via a 3A fused spur with disconnection facility.

Never tap into ring main circuits that have fridges/freezers on them.

Never tap into lighting circuits that have fluorescent lighting units on them.

⚠ Mains Wiring - WARNING: Electricity can KILL

Before connecting the control panel **ALWAYS** disconnect the supply at the consumer unit. A 230V a.c supply should be taken directly from the consumer unit. In order to comply with the relevant current wiring regulations this should be via a 3 Amp fused spur with disconnection facility. This must be carried out by a suitably qualified electrician. If you are in any doubt please contact your local electricity company for advice. **This control panel MUST be Earthed.**

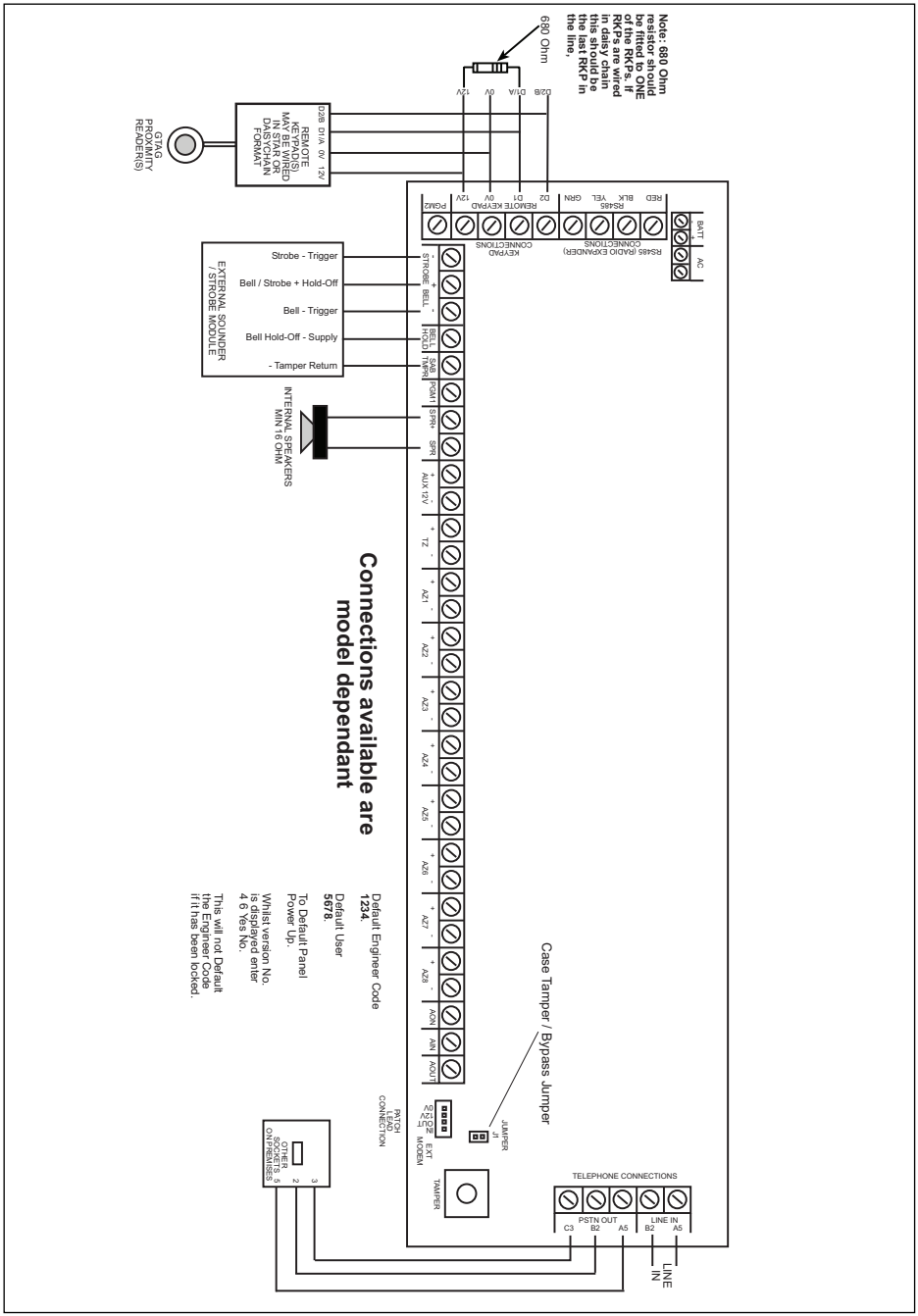


Mains
Connection Colours

Live = Brown (Red)
Neutral = Blue (Black)
Earth = Copper

Yellow/Green sleeving should be used for Copper Earth Conductor

Wiring Diagrams - GT490X PCB



Remote Keypads

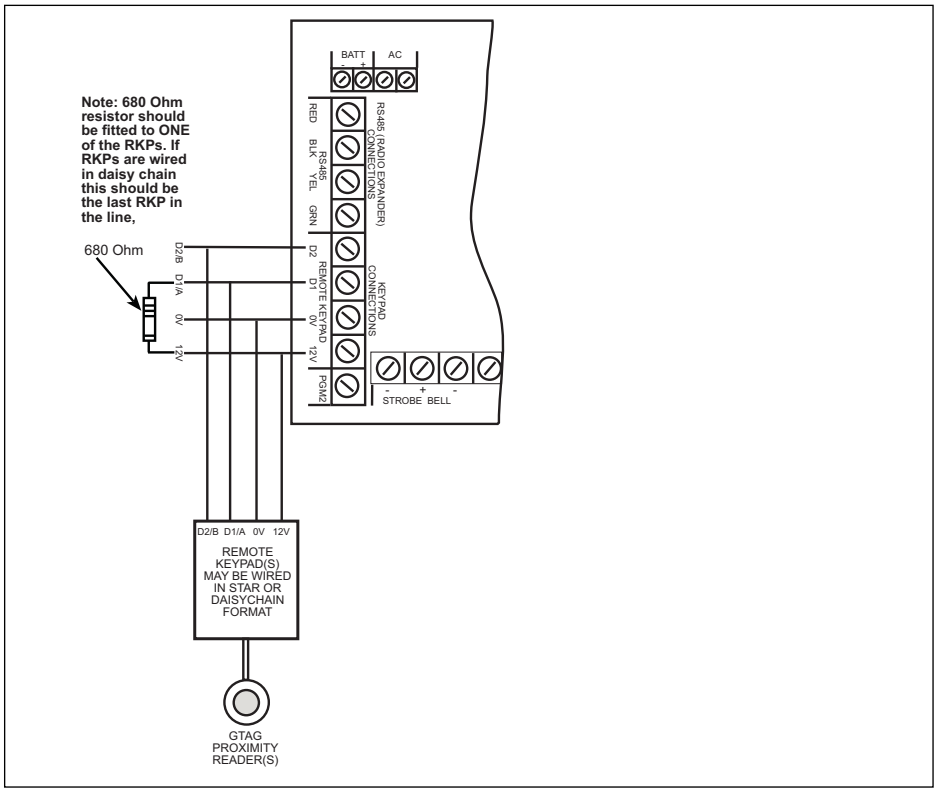
Up to four remote keypads may be fitted to the GT490X control panel. Each Keypad offers a 32 character backlit LCD.

A four core connection will be required between the control panel and remote keypad(s), keypads may be in a 'daisy chain' or 'star' format.

Note: 680 Ohm resistor must be fitted to ONE RKP. If the RKPs are wired in daisy chain format this should be the last RKP in the line.

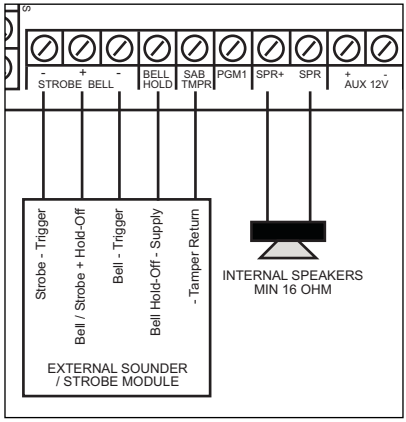
Note: Each keypad must be programmed onto the system in order for it to be recognised by the system.

Note: Depending on the variant of keypad fitted external G-Tag Proximity Reader(s) may be fitted to each Remote Keypad.



Note: Please refer to the back of this manual if the Control Panel has been supplied with a 4 Wire Contour RKP (with added zones) for wiring information.

Control Panel Output Connections

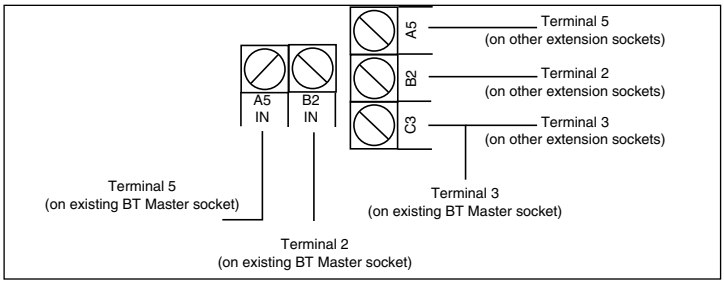


Digi Modem

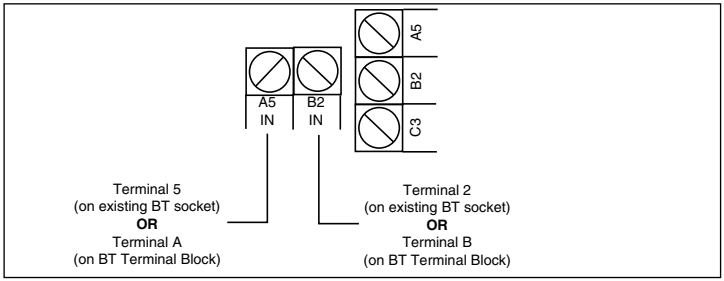
The GT490X control panel feature an onboard Digi modem. The Digi provides all the features of an eight channel communicator whilst the Modem provides facilities for Gardtec Remote Upload/Download software package.

Telephone Connections

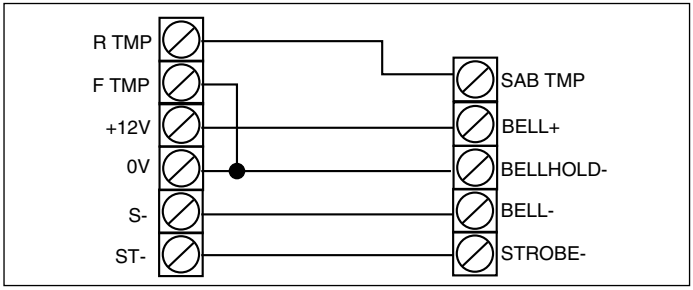
Serial Telephone Connection (Depending on model)



Standard Telephone Connection



Typical Novagard 2G/2G Connections

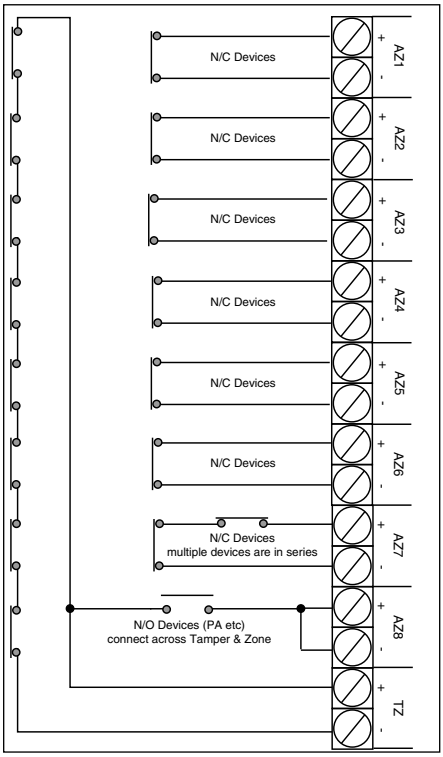


NovaGard 2G/4G
(Strobe terminals omitted)

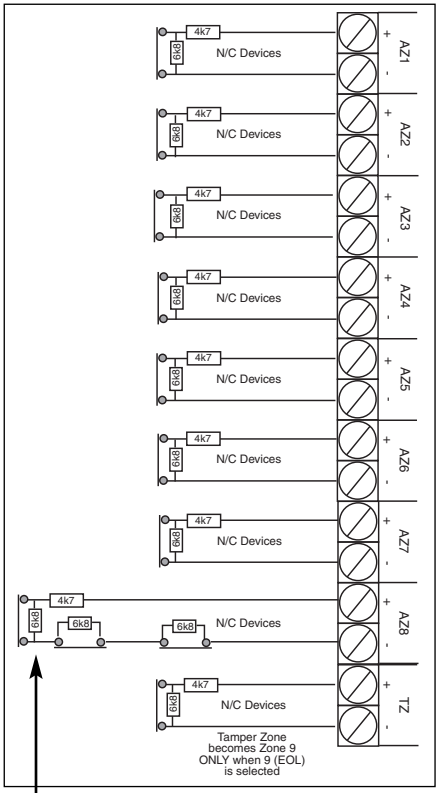
GT490X Control Panel

Control Panel Input (Zone Connection)

Please see following page for further wiring modes where Anti-Mask detectors are used



Standard (2 Wire) Zone Wiring

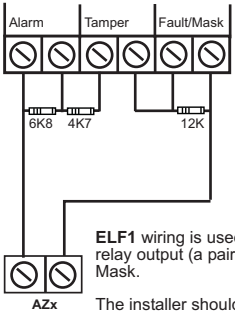


End of Line Zone Wiring

Multiple units can only be used with BS Standard.
If using EN2, one unit per zone.

Typical Wiring Modes

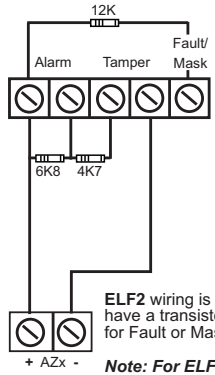
Where Anti-Mask detectors are used, one of the following wiring modes may be used.



ELF1 wiring is used for detectors that have a relay output (a pair of terminals) for Fault or Mask.

The installer should check what output type the detectors are, noting that all the dectectors should be of the same type with regards to the Fault / Mask output.

Typical ELF1

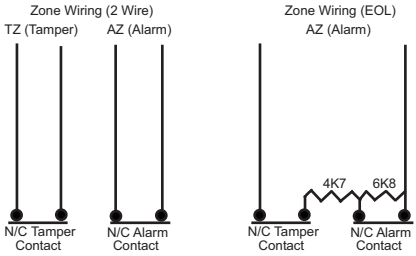


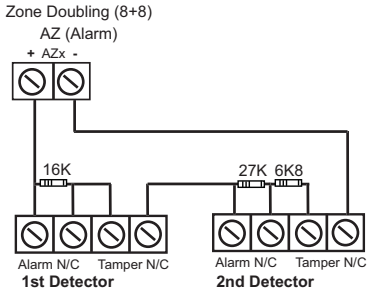
ELF2 wiring is used for detectors that have a transistor output (a single terminal) for Fault or Mask.

Note: For ELF2 wiring format the 12K resistor must be linked to the positive side of the zone terminals.

Typical ELF2

More Zone Wiring Methods





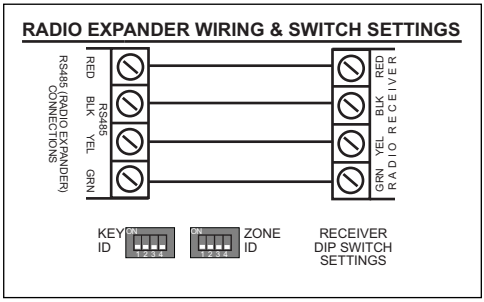
Zone Doubling: Detector on Zone 1 will be Zone 1 and the Doubled Zone will be Zone 9, Zone 2 will be Zone 2 and the Doubled Zone will be Zone 10. E.g Zone number + 8 = Zone number for Doubled Zone. The Zone triggered will be identified through the resistor value by the system.

Radio Zone Expander

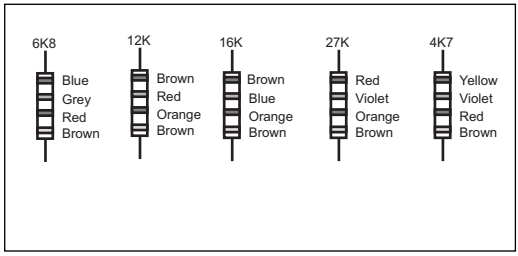
One GardTec Radio Zone Expander may be fitted directly to the RS485 Bus connections on the control panel PCB without the need for any interface card. A Radio Expander card will allow eight wireless zones & eight wireless Fobs.

Radio Zone Programming

When programming Radio Zones the zone numbering for the Radio Zones will start at 91. When programming Radio Fobs the numbering of the Fobs will start at 81.



Resistor Colour Codes



3 RESETTING FACTORY DEFAULTS

Several reset to factory default routines are available to the engineer at system power-up but **it should be noted that none of these routines will 'Un-Lock' a ' Locked' Engineer Code.**
The following default routines are available.

a) Pressing **1, 9, YES, NO** during initial power up will revert the Master Code and Engineer Code (not locked engineer code) back to factory defaults.

b) Pressing **3, 7, YES, NO** during initial power up will revert all system settings back to defaults with the exception of the User Names and Zone Descriptors.

c) Pressing **4, 6, YES, NO** during initial power up will revert all system settings back to factory defaults. ***It is ESSENTIAL that a 4 6 YES NO reset is done to all new systems before commencement of programming.***

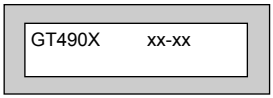
d) Pressing **5, 5, YES, NO** during initial power up will revert all system settings to factory defaults and will also set the comms options up for GardTec Remote. ie Modem On; No Return. **For commissioning systems for use with GardTec Remote use this option.**

Reset of the factory defaults and entering Engineer Mode:-

Note: ***It is ESSENTIAL that a 4 6 YES NO reset is done to all new systems before commencement of programming.***

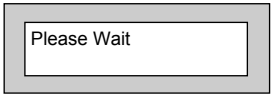
1) Remove all power from the system for at least ten seconds

2) Apply mains power to the control panel.
The display will show, for example:-
(Display will differ dependant on panel version)

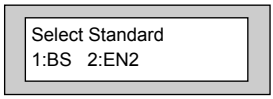


3) Whilst this display is showing (the first five seconds) press the keys shown in a, b, c or d for the reset required. **(E.g. 4 6 Yes No)**.

The display will show:-
This may show for several minutes.

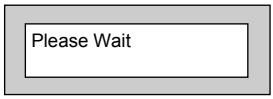


4) The display will then show:-

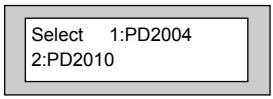


Selecting 1:BS - Panel may be programmed to comply with the old BS4737 Standards. DD243 requirements will still apply.
Selecting 2:EN2 - Panel may be programmed to comply with EN50131-1 for Grade 2 Systems. BS8243 requirements will still apply.

5) Select **2:EN2**.The display will then show:-
This may show for several minutes.



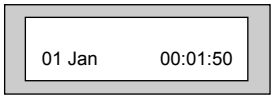
The display will then show:-



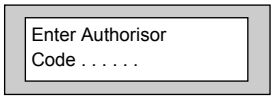
6) Select either **1 or 2** depending on which standard you require.

Note: *This document assumes that **2:EN2** and **PD2010** have been selected .*

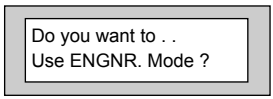
The display will then show:-



7) Enter Engineer code.
(1234 default). The display will show:-

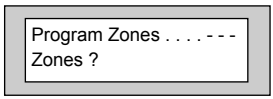


8) Enter the Authorisor code. The Authorisor code is the Master User, **(default 5678)**.
The display will show:-



Note: *It may be required that an engineer has to be authorised by a user before access to the engineer mode is granted.*

9) Press Yes. The display will show:-

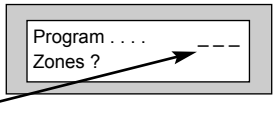


From this point the panel is in Engineer Mode and all Tampers will be disabled.

4 PROGRAMMING

Moving Around

Enter Engineer mode as described on page 13.
The display will show:-



Whenever three underscores are shown on the display the screen is a header.

Pressing the NO key will move to the next header.

Pressing the YES key whilst viewing a header will enter into the options under that header.

Pressing 0 will escape back one step (except when a numeric entry is required).

You are able to jump to various common options when programming by entering the relevant menu numbers. With a **Header** showing, key in the appropriate menu number, then press Yes. (See Page 17 for Common Options with Menu Numbers).

Below is given a complete list of headers (**Shown in Bold Underline**) and options that appear under each header.

Headers & Options

Program Zones

Zone Types
Zone Descriptors
Zone Wiring
Zone Attributes
(Test/Part/Sec/Per/Chime)
Zone Double Knock/Arm/Log
Zone E/E Mode
Event Tags

Setting Modes

Setting For Full Sets
Setting For Part 1 Sets
Setting For Part 2 Sets
Setting For Part 3 Sets
Setting Delay
Setting Sounders
Setting Conformation
Auto Part Set

Headers & Options

Entry Times

Entry Time 1
Entry Time 2

Bells / Sounders

Bell Type
Bell Delay/No Arms
Bell & Sounder Ring
Bell Tamper Mode
Bell For Part Set

Headers & Options

Keypad / Keyswitch

Keypad Alert 1 Keys
Keypad Alert 2 Keys
Function Keys
Number of Keypads
Keypad Backlight Mode
Ace / Prox

Digicom

Type or Test
Vo-Comm
Start Delay
Channels
Digicom/Modem Functions

Line Fault Modes

Line Fault Sounders
Line Fault Mode in Exit
Line Fault Log Mode
Line Fault Detect Time

Panic / Duress

PA Mode / Bells Only / Bells Always
Silent Always / Bells if Line Fault
Testable / Non-Testable
PA Confirm *(PA Confirm is defaulted to Off). Off/8Hr/10Hr/12Hr/14Hr/16Hr/18Hr/20Hr.*
Duress Off *(To conform with EN standards, Duress is defaulted to Off and cannot be changed)*

PGM2 / PGM3 / Timers

PGM2/3 Operating Mode
PGM 2 Mode
PGM3 Mode
Timer 1 On Time
Timer 1 Off Time

Headers & Options

Reset / Mains

Mains Fail Delay
Alarm Reset
Tamper Reset
Fault Reset
Alarm Restore On/Off
Abort Time

Sounder Levels

Chime Level
Entry/Exit Level
Key Beep Level

PGM1/Custom

PGM1 O/P
Custom Output 1
Custom Output 2
Custom Output 3
Custom Output 4
Custom Output 5
Custom Output 6
Custom Output 7
Custom Output 8

Engineer Code

Engineer Code
Engineer Code Locked/Unlocked

Headers & Options

Service

Mains OK 50Hz
Save Panel NVM to PTM
Load Panel NVM to PTM
Service Timer
Time To Next Service
Service Tel No.
Lock-Out On/Off
Engineer Mode Constant/Timed

Custom Screens

LCD Status Display
(To conform with EN standards, LCD Status is defaulted to Off and cannot be changed)
LED Status Display

Diagnostics / Log

List Event Log
Change List Diagnostics
PSU Diagnostics
NovActive Diagnostics
PSU Test Time
Change / List Test Limits
Aux Volts
Battery Volts On Charge
Battery Volts Off Charge

Headers & Options

Alarm Confirm

Window Time
On Entry
Sounder Mode
Reset Mode
Secondary Time
ET Mode
Bell Mode
Strobe Mode
Start Delay
Comms Restore
Keypad Opening
ACE Battery Monitor

In conclusion, the Yes and No Keys are used to navigate. The No Key is also used to change a value (may also require a numeric input) and the Zero Key is used to move back a level (not when display is expecting a numeric input)

If you are confident in programming the GT490X Control Panel please use the headers and options above to continue

Otherwise

Please continue with the next section for a Step by Step Guide to programming the GT490X Control Panel.

Only the major options will be covered in the Step by Step sections. After completing the sections you should be confident to program the remaining options.

Common Options with Menu Numbers

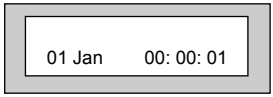
You are able to jump to various common options when programming by entering the relevant menu numbers. With a **Header** showing, key in the appropriate menu number, then press Yes.

Menu	Jumps to
1	PGM 1 Output
2	Timer 1 On Time
4	Timer 1 Off Time
6	PA Mode
8	Chime Level
9	Entry Exit Level
10	Exit Sounder Mode
11	Final Set Delay
12	Full Set Setting Time / Setting Mode
13	Part 1 Set Setting Time / Setting Mode
14	Part 2 Set Setting Time / Setting Mode
15	Part 3 Set Setting Time / Setting Mode
20	Alert 1 Keys Mode / On Off
21	Alert 2 Keys Mode / On Off
22	Install Keypads
23	Bell Delay / No. of Bell Arms
24	Bell Ring Time / Sounder Mode
26	NovActive On Off
27	Bell Tamper Ring On Off
28	Entry Time 1
29	Entry Time 2 / Warning Bell
30	Fire Zone Delay
34	Digicom Type
35	Key Beep Level
37	Zone Re-Arm / Double Knock Time
38	Engineer Code
40	Line Fault Sounders
41	Line Fault Mode
42	Line Fault Log
44	PGM 1 Output
46	Main Fail Delay
47	Tamper / Fault Reset Mode
48	Backlight Mode
50	Zone Response
51	Zone Types
52	Test Zone (Attributes)
53	Save Panel NVM to PTM / Service Timer
54	Service Due Weeks
55	Zone Log Limit
58	Digicom Channels
64	Alarm Restore / Abort Time
65	Test Digicom Channels
66	E/E Zones in Part Set
67	Engineer Code Locked / Unlocked
68	Strobe Confirm

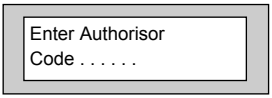
Menu	Jumps to
69	Auto Part Set
70	Part Set Bells
71	Zone Types (Enter Zones)
72	On Board Pairing
75	Program Zone Wiring
92	LCD Status
97	List Event Log
131	NovActive
139	PSU Test Time
153	Test Zones
155	Confirm Time Window (BS8243 Section)
156	Secondary Time Window
157	Confirm on Entry On Off
158	Sounder Trigger
159	Unconfirm Reset Mode
160	E/T Mode
161	Bell Trigger
162	Confirm Start Delay
164	Strobe Timer
165	Strobe Trigger
166	Custom 1 OP Mode
167	Custom 2 OP Mode
168	Custom 3 OP Mode
169	Custom 4 OP Mode
170	Custom 5 OP Mode
171	Custom 6 OP Mode
172	Custom 7 OP Mode
173	Custom 8 OP Mode
174	Comms Restore On Off

Programming Zones

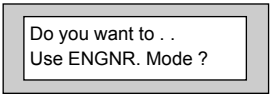
1) With the display showing:-



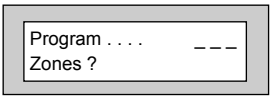
2) Enter the Engineer code **(1234 default)**
The display will show:-



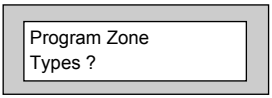
3) Enter the Authorisor code. The Authorisor code is the Master User, **(default 5678)**.
The display will show:-



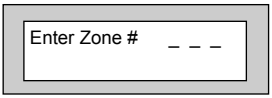
4) Press YES. The display will show:-
This is Engineer Mode.



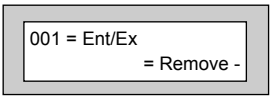
5) Press Yes. The display will show:-



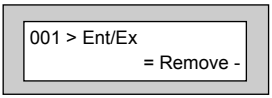
6) Press Yes. The display will show:-



7) Enter the zone number you wish to program e.g 1 followed by Yes. The display will show, for example:-



8) Press No. The display will show:-



9) Note the chevron has now appeared before the Zone Type. Now press the No key until the Zone Type you require is displayed.

Zone Types available are:-

12 Hour

Full Alarm if Control Panel is Set.

Access

Will allow to pass through on exit.
Will allow to pass through on entry only if E/E is opened first.

24 Hour

Internal Sounder if Unset.
Full alarm if Set.
Remains active in Engineer Programming Mode.

Entry/Exit (or E/E)

Zone used as last exit point (will terminate exit time if setting mode is set to E/E or Time+E/E).
Will start E/E time if opened when Control Panel is Set

Part E/E

As Access if Control Panel is Full Set
As Entry/Exit if Control Panel is Part Set

Panic

24Hour Personal Attack (or Panic Attack). Active if Control Panel is Set, Unset or in Engineer Programming Mode . May only be tested via Engineer code if programmed as testable.

Alert

Internal Sounder Only, Recorded to Log when Unset
Recorded to Log when SET

Fire

Will give Fire alarm when activated (pulsed sounders) with Control Panel Set or Unset.
Remains active in Engineer Programming Mode.

ET

Exit terminator. Used for final setting of the system. Exit Mode must be programmed for ET.

Monitor

Will write to the log once only in any one set or unset unless chime is allocated then all activations are written to the log.

KSW Bat

When used, zone should be connected to the trouble/status output of third party radio equipment that is capable of giving a low battery signal.

Line Fault

When used, acts as a Line Fault input to the control panel.

Fault

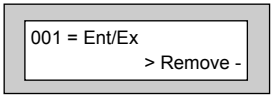
When used, will act as an Fault input to the control panel when an internal fault has been detected within the PIR.

Mask

When used, will act as an input to the control panel if the detector has been blocked or covered.

***Note**: Fault and Mask are treated as 24Hr but trigger a Fault Sound in Day (Unset) Mode. The Fault sound is a three tone sounder.*

10) When you are satisfied with your selection press Yes. The display will show for example:-



We will now be changing the Zone Attributes. Options available are:

Remove- The zone may not be Removed (Omitted) by the end user. (Part Sets are still allowed).

Remove+/DK Zone may be Removed (Omitted) by the end user and is a Double Knock Zone (2 activations required within time window or zone left open for 15 seconds).

Remove-/DK Zone may not be Removed by end user (Part Sets are still allowed) and is Double Knock Zone.

Off Zone is turned Off (Use with caution).

Norm Key Zone is a Keyswitch Zone for a normal type Keyswitch

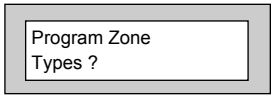
Bias Key Zone is a Keyswitch Zone for a Bias (momentary) type Keyswitch

Remove+ Zone may be Removed by end user.

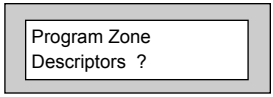
11) Press No until the setting you require is displayed then press Yes.

12) The display will show the next zone to program. You should repeat from Step 7 until you have programmed all the zones.

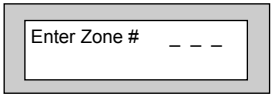
13) When all required Zones have been programmed press 0 (zero) key **twice**. The display will show:-



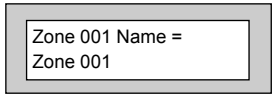
14) Press No. The display will show:-



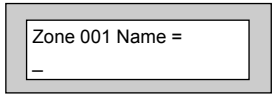
15) Press Yes. The display will show:-



16) Enter the Zone number you wish to program the Descriptor for followed by Yes. The display will show for example:-



17) Press No. The display will show:-



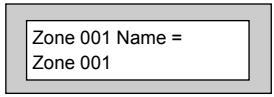
18) You should now program the Descriptor you require using the template below for the key allocation in a similar way that you you would type a text message on a mobile telephone.

As the desired character is displayed press the Yes key to move on to the next character.

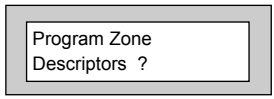
Continue until the line is complete.

1	**2**	**3**
ABC	DEF	GHI
4	**5**	**6**
JKL	MNO	PQR
7	**8**	**9**
STU	VWX	YZ Space
No	**0**	**Yes**
Delete	1234567890	Enter Character

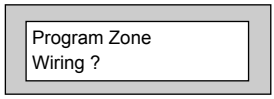
19) As you enter the last character the display will move on to the next Zone. For example:-



20) Repeat from Step 16 until all the Descriptors you require have been programmed. Then press 0 (zero) key **twice**.
The display will show:-

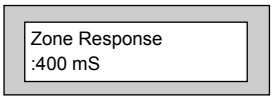


21) Press No. The display will show:-



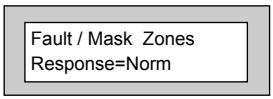
22) Press Yes. The display will show:-

***Note**: Zone Response time is defaulted to 400ms and may not be changed.*



23) Press Yes. The display will show:-

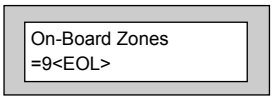
***Note:** Zone response time may be programmed as a global parameter. The default time is 400ms and may be reprogrammed from 2 to 14 seconds. (increments of 2 seconds).*



The time programmed for this option will apply to all zones, there is no option for individual response times per zone. It is a global setting.

Once the Fault / Mask as been triggered the response time for the Fault / Mask will revert to the default time of 400ms until the fault / mask problem has cleared.

24) Press No until the required settings you require are displayed then press Yes. The display will show:-



Wiring Modes available are.

8 (2 Wire) Two wires are used for the zone and a global tamper is used.

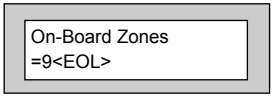
9 (EOL) Two wires are used in conjunction with two resistors to give End Of Line wiring, this is the most secure wiring format.

8+8 (EOL) This wiring method uses double EOL format to give 16 Zones from the control panel.

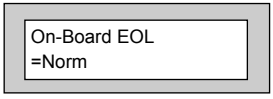
Note: For information on how to wire for the various wiring modes please refer to the wiring section within this manual.

If selecting 9 (EOL) follow steps 24 through to 26. If selecting 8+8 (EOL) jump to step 28.

25) With the display showing:-
Press Yes.



26) The display will show:-



Three wiring options are available under 9 (EOL):

Norm: Standard GardTec wiring configuration without Mask or Fault detection.
Note: *Does not give any Fault or Masking detection and should only be used with Zone pairing.*

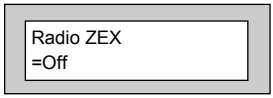
ELF1: ELF1 wiring is used for detectors that have a relay output (a pair of terminals) for Fault or Mask..

ELF2: ELF2 wiring is used for detectors that have a transistor output (a single terminal) for Fault or Mask.

Note: *We would recommend that either ELF1 Format or ELF2 Format (dependant on detector output type, Relay or Transistor) is used. ELF1 or ELF2 wiring modes will allow for Alarm, Tamper, Fault and Masking to be monitored from a single zone without the need for zone pairing.*

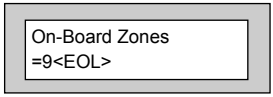
Note: *The installer should check what output type the detector are, noting that all the detectors should be of the same type with regards to the Fault / Mask output.*

27) Press No until the setting you require is displayed then press Yes. The display will show.

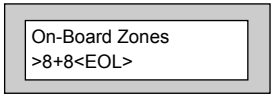


If 8+8 EOL wiring option is required.

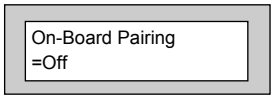
28) With the display showing:-
Press No until 8+8<EOL> is displayed.



The display will show:-



29) Press Yes. The display will show:-



Zone Pairing.

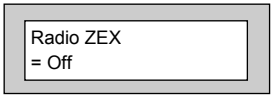
A zone is used to monitor Masking and Fault.
This is achieved by selecting Zone Pairing as on. Zone Pairing cannot be used in ELF1 or ELF2 wiring modes.

When using Zone Pairing each zone will have a corresponding paired zone that will be used for Masking and Fault signals. This is done by using the Odd numbered zones for the normal alarm detection and the Even numbered zones for Masking and Fault Detection. For example.

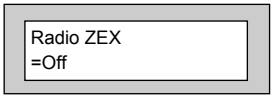
Alarm Zone	**Pared Zone for Mask / Fault**
Zone 1	Zone 2
Zone 3	Zone 4
Zone 5	Zone 6
Zone 7	Zone 8
etc...	

Please note that half the zones on the system would be lost for processing the Mask and Fault signals and it would be more prudent to use the ELF1 or ELF2 modes as described previously.

30) Press No until the setting you require is displayed. Then press YES. The display will show:-



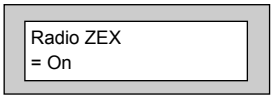
31) With the display showing:-



32) If you are not using Radio Detectors press Yes and jump to Step 33

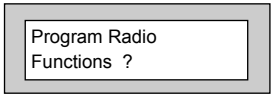
Otherwise

Press No until the display shows:-

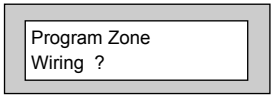


Comprehensive instructions on how to setup and program the Radio Expansion are given in the document Hybrid Wireless Set-Up & Programming Guide supplied with the Radio Receiver.

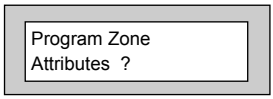
33) Press Yes. The display will show:-



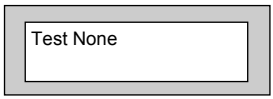
34) Press No. The display will show:-



35) Press No. The display will show:-



36) Press Yes. The display will show:-



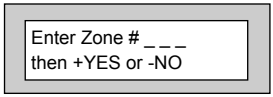
Any 12Hr type zone(s) may be placed on Test. A Zone on Test will never trigger an alarm or send a central station signal. If the Zone(s) fails the Test when the system is Set the display will show Test Fail when the user Un-Sets the system. After 20 successful Sets and Un-Sets the Zone(s) will be taken out of Test by the system.

Zones on soak test.
Zones that are put on test must be indicated to the user. When setting the system the user must acknowledge this by pressing No.

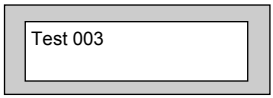
37) If you do not wish to put a Zone(s) on Test press Yes and jump to Step 43

Otherwise

38) Press No. The display will show:-



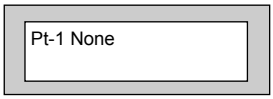
39) Enter the Zone number you wish to place on Test followed by Yes.
The display will show for example:-



40) To add more Zone(s) to the Test repeat from Step 38.

41) When you have finished adding Zones to Test press Yes.

42) The display will show:-

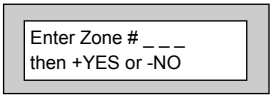


Three Part Sets are available on the GT490X control panel. Zones added to the PT-1 (Part 1) screen will be Removed (Omitted) when the system is Part 1 Set. Zones added to the PT-2 (Part 2) screen will be Removed (Omitted) when Part Set 2 is used. When Part Set 3 is used Parts 1 & 2 are combined and Removed (Omitted).

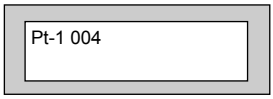
43) If you do not wish to enter PT-1 Zone press Yes and jump to Step 47

Otherwise

Press No. The display will show:-



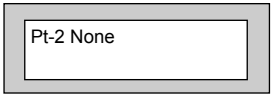
44) Enter the Zone number you require for PT-1 followed by Yes.
The display will show for example:-



45) To add more Zones to PT-1 repeat from Step 43

46) When you have finished adding Zones to PT-1 press Yes

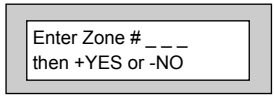
47) The display will show:-



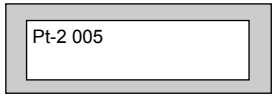
48) If you do not wish to enter PT-2 Zone press Yes and jump to Step 52

Otherwise

Press No. The display will show:-



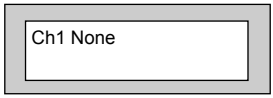
49) Enter the Zone number you require for PT-2 followed by Yes.
The display will show for example:-



50) To add more Zones to PT-2 repeat from Step 47

51) When you have finished adding Zones to PT-2 press Yes

52) The display will show:-



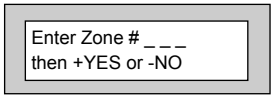
Two Chime suites are available on the GT490X control panel so for example you would have the Front Door on Zone 1 programmed into Ch1 and the Rear Door on say Zone 6 programmed into Ch2. When the system is Unset opening the Front Door will produce a Chime. Opening the Rear Door will produce a different Chime.

It should be noted that Chime must be programmed as On from the user mode. Please refer to the User Manual for details.

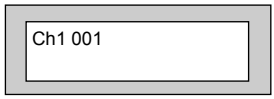
53) If you do not wish to enter Ch1 Zone press Yes and jump to Step 57

Otherwise

Press No. The display will show:-



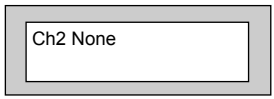
54) Enter the Zone number you require for Ch1 followed by Yes.
The display will show for example:-



55) To add more Zones to Ch1 repeat from Step 53

56) When you have finished adding Zones to Ch1 press Yes

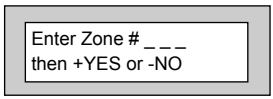
57) The display will show:-



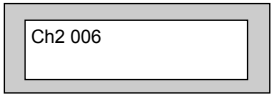
58) If you do not wish to enter Ch2 Zone press Yes and jump to Step 62

Otherwise

Press No. The display will show:-



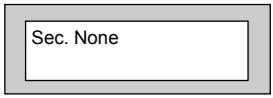
59) Enter the Zone number you require for Ch2 followed by Yes.
The display will show for example:-



60) To add more Zones to Ch2 repeat from Step 58

61) When you have finished adding Zones to Ch2 press Yes

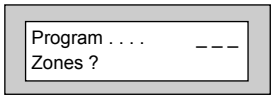
62) The display will show:-
(See notes on Sec & Per after step 65).



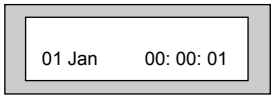
63) **This concludes the Step by Step instruction for the Zone Programming.**
You may continue within this section to program

Secondary Zones
Perimeter Zones
Double Knock Time Window
Zone Re-Arm
Zone Log Limit
Zone E/E Mode
Event Tags

64) Press 0 (zero) **twice** to return to:-



65) At this point you may press No to move to the next Header.
Or
Press 0 (zero) until the display shows:-



Secondary Zones:

Zones programmed as secondary will not active any sounders or comms until a normal zone activates.
This will then trigger a confirmed signal and activate the sounders as programmed.

Perimeter Zone:

Zones programmed as perimeter will activate the alarm as normal but will also activate a comms channel programmed as perimeter.

DKnock/Arm/Log:

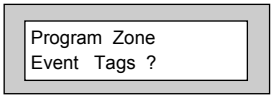
Zones on double knock are required to activate within the double knock time window or stay active for fifteen seconds to generate an alarm condition.

Arm is used to program the zones to automatically re-arm after an activation. It should be noted that a zone still violated when the system times out after an alarm, will not re-armed.

Note: *Zone Log Limit is defaulted to On and may not be changed. Only five activations from any one zone will be recorded in the log during any set period.*

Note: ***E/E*** *in part set entry exit zones will start the entry timer if opened in part set.*
12Hr *in part set entry exit zones will be instant when opened in part set.*

Reporting a Mains Fail on a PSU.



In order to report a Mains Fail on a PSU the Fault output on the PSU would be wired to a Zone on the Control Panel.

The Zone Type would be programmed as 'Fault'.

Program the Zone Descriptor as External PSU.

At the end of the Program Zones menu we have a menu called Program Events Tags, enter this option and select the Zone number you have programmed as Fault.

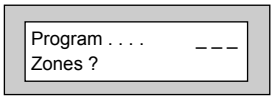
Program the Tag as Mains Fail. Then program a Digi Channel as Mains Fail.

This will allow for full reporting of External PSUs.

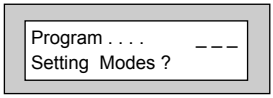
Programming Setting Modes

Setting Modes are the modes that the control panel will use to set the system for a particular type of set. An example of this may be that the Full Set Modes is programmed as Final Exit Door (door opening and closing during exit will set te panel) whilst the Setting Mode for Part Set 1 is timed. Each type of Set (Full, Part 1, Part 2, Part 3) may have its own Setting Mode.

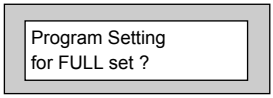
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



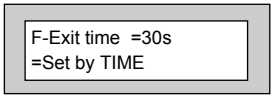
2) Press No. The display will show:-



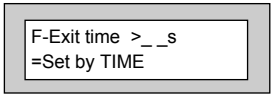
3) Press Yes. The display will show:-



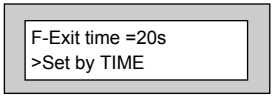
4) Press Yes. The display will show:-



5) Press No **twice**. The display will show:-



6) Enter the time you require as the Exit Time
(in seconds) followed by Yes.
The display will show for example:-



7) Use the No key to scroll through the Setting Modes.

Options available for Setting Modes are.

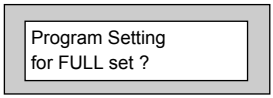
Set By Time The system will Set after the Time shown in the Exit Time.

Set By ET The system will set when the Exit Terminator Button outside the premises is pushed (this option will require a Zone to be programmed as Exit Terminator).

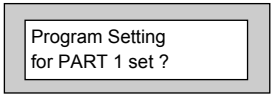
Set By E/E Once the user has started to Set the system the Exit Tones will continue until the Final Exit Door is opened then closed. This option will require a Door Contact.

Set By Time+E/E Once the user has started to Set the system the system will Set on either the Time expiring or the door opening and closing. This option may require a Door Contact.

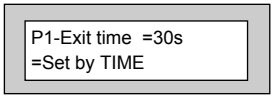
8) When the Setting Mode you Require is displayed press Yes. The display will show:-



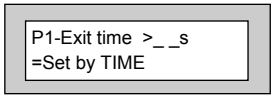
9) Press No. The display will show:-



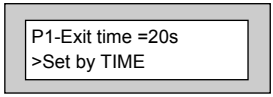
10) Press Yes. The display will show:-



11) Press No **twice**. The display will show:-

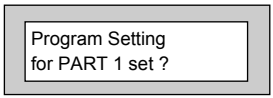


12) Enter the time you require as the Exit Time (in seconds) followed by Yes.
The display will show for example:-

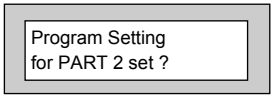


13) Use the No key to scroll through the Setting Modes.

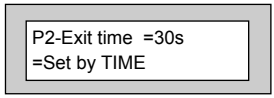
14) When the Setting Mode you require is displayed press Yes. The display will show:-



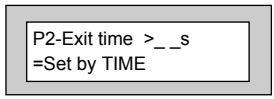
15) Press No. The display will show:-



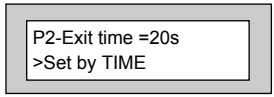
16) Press Yes. The display will show:-



17) Press No **twice**. The display will show:-

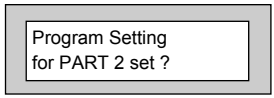


18) Enter the time you require as the Exit Time (in seconds) followed by Yes.
The display will show for example:-

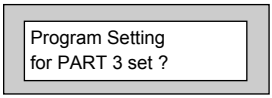


19) Use the No key to scroll through the Setting Modes.

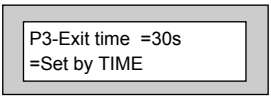
20) When the Setting Mode you Require is displayed press Yes. The display will show:-



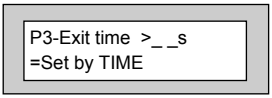
21) Press No. The display will show:-



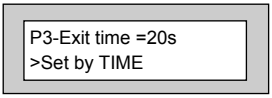
22) Press Yes. The display will show:-



23) Press No **twice**. The display will show:-

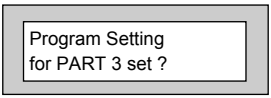


24) Enter the time you require as the Exit Time (in seconds) followed by Yes. The display will show for example:-

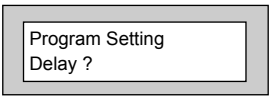


25) Use the No key to scroll through the Setting Modes.

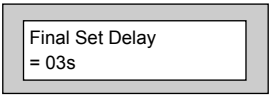
26) When the Setting Mode you Require is displayed press Yes. The display will show:-



27) Press No. The display will show:-

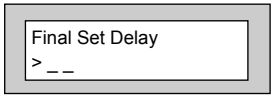


28) Press Yes. The display will show:-

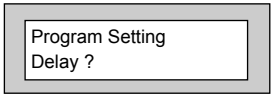


The Final Set Delay is a period of time in seconds after the expiry of the Exit Time and is intended to allow any PIRs for example that are on the Exit Route to settle before the system finally Sets. The majority of PIRs will settle within the Default Time of 3 seconds but some may need a Final Setting Delay of up to 10 seconds.

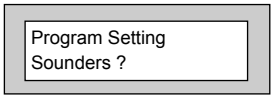
29) Press No **twice**. The display will show:-



30) Enter the Time required (in seconds) followed by Yes. The display will show:-



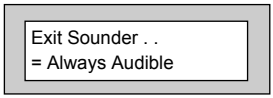
31) Press No. The display will show:-



Setting Sounders refers to Part-Sets Only

The Setting Sounders option determines if any, or all Part Sets are audible (Exit Tones) or not. This is a useful feature when part of the family may already be asleep when the system is being Part Set.

32) Press Yes.The display will show:-



33) Press the No key to scroll through the options

Options available for Setting Sounders are.

Always Audible Exit Sounder will be audible for Full Set and all Part Sets

Silent If Part 1 Exit Sounder will be silent during a Part 1 Set

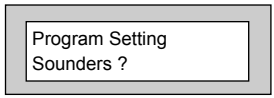
Silent If Part 2 Exit Sounder will be silent during a Part 2 Set

Silent If Part 3 Exit Sounder will be silent during a Part 3 Set

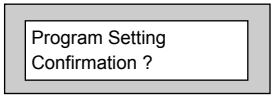
Always Silent Exit Sounder will be silent during ANY Part Set

When using a silent Part Set a single beep will be heard at the end of the Exit Time to confirm the system has Set.

34) When you have the required setting displayed press Yes. The display will show:-

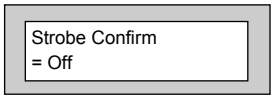


35) Press No. The display will show:-



Setting Confirmation uses the Strobe Light to confirm that the system has finally set.

36) Press Yes. The display will show:-



37) Press the No key to scroll through the options

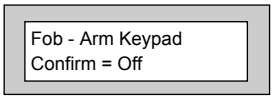
Available options for Strobe Confirm are.

Off Strobe Confirm is turned Off

Full-Set The Strobe will Confirm only on Full Set

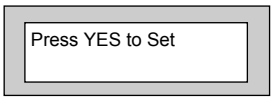
Any-Set The Strobe will Confirm on Any Set (Full or Part)

38) When the required setting is displayed press Yes. The display will show:-



Press No to select On/Off.

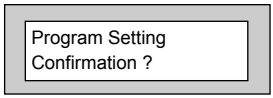
If programmed to On, when the radio fob is pressed to arm the system the keypad will display:-



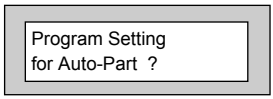
If Yes is pressed the system will start to set.
Note: If the No key is pressed or you take longer than 20 seconds the display will return to the time and date.

---

39) When the required setting is displayed press Yes. The display will show:-



40) Press No. The display will show:-



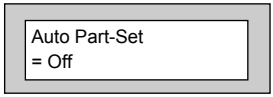
Auto Part Set allows the system to decide if the Setting should be Full Set or Part 1 Set. In order to use this option the Setting Mode for Full Set MUST be Time+E/E and a Door Contact must be fitted to the door.

If the system sees the door open and close during a setting procedure the system will Full Set.

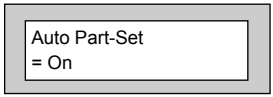
If the system does not see the door open and close during a setting procedure the system will Part 1 Set.

It is not possible to use Silent Part Sets with this option as the decision to do a Part 1 set is taken after the Entry Time has expired.

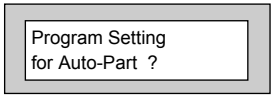
41) Press Yes. The display will show:-



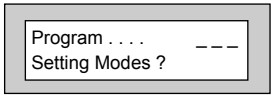
42) To change this press No **twice**.
The display will show:-



43) Press Yes. The display will show:-

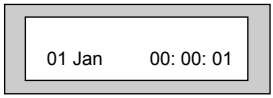


44) This concludes the programming for Setting Modes. Press 0 (zero) to return to:-



Or

Press 0 (zero) until the display shows:-



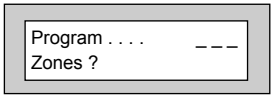
Programming Entry Times

Two Entry Times are available (Entry Time 1 & Entry Time 2). On entry to the premises via the Entry Door Entry Time 1 will start. If deviation from Entry Route during Entry Time 1 then Entry Time 2 starts. Entry Time 2 is 30 seconds and cannot be changed. Note that comms cannot take place until the later of the theoretical expiry of Entry Time 1, or the expiry of Entry Time 2.

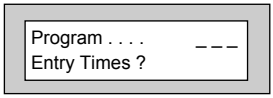
Note: **Entry Time 1** is defaulted to 30 seconds but maybe changed to a maximum of 45 seconds. **(EN2 Only)**.

Note: **Entry Time 2** is defaulted to 30 seconds and may not be changed.

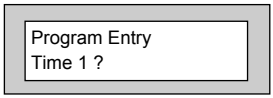
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



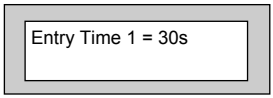
2) Press No **twice**. The display will show:-



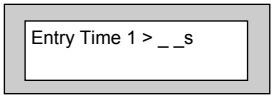
3) Press Yes. The display will show:-



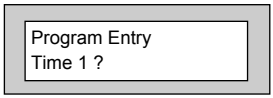
4) Press Yes. The display will show:-



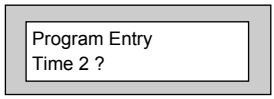
5) Press No **twice**. The display will show:-



6) Enter the Time required (in seconds) followed by Yes. The display will show:-

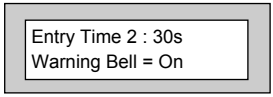


7) Press No. The display will show:-



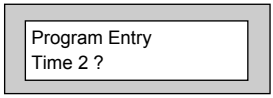
8) Press Yes. The display will show:-

Note: *Entry Time 2 is defaulted to 30 seconds and may not be changed.*

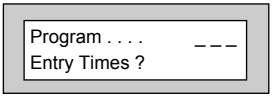


Warning Bell. *Default is set to On but may be changed to Off. If Warning Bell is On, then Bells will operate during Entry Time 2, after the theoretical expiry of Entry Time 1 has been reached. If set to Off, the bells will activate only when both Entry Time 1 and 2 have expired.*

9) Press No to change the setting followed by Yes
The display will show:-

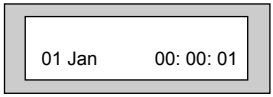


10) This concludes the programming for Entry Times. Press 0 (zero) to return to:-



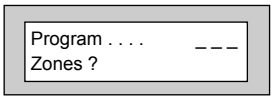
Or

Press 0 (zero) until the display shows:-

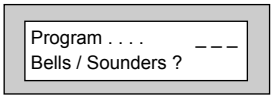


Programming Bells / Sounders

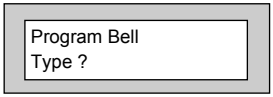
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



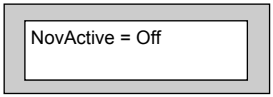
2) Press No **three times**. The display will show:-



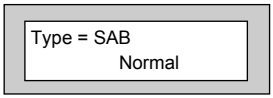
3) Press Yes. The display will show:-



4) Press Yes. The display will show:-
For information on NovActive refer to page 89



5) This option should remain Off unless you are using a NovActive Bell Box
Press Yes. The display will show:-



Two Types of Bell may be programmed.

SAB Self Actuating Bell. The Bell + terminal stands at 12V and the Bell - terminal switches negative on activation.

SCB Self Contained Bell. The Bell + and Bell - stand at 12V and 0v. The 0V is removed on activation.

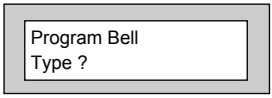
The majority of Bells sold in the UK are SAB you should only change the Bell Type if you are sure the Bell Type you have is SCB.

The other option on this screen may be programmed as

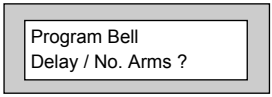
Normal Normal UK trigger for the UK

Irish A Pull-Up resistor is required on the Bell Trigger this option is only required for the Irish Republic.

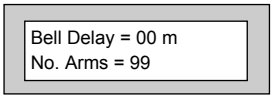
6) Press Yes. The display will show:-



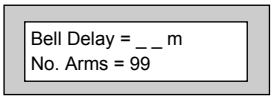
7) Press No. The display will show:-



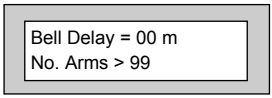
8) Press Yes. The Display will show:-



9) Press No **twice**. The display will show:-



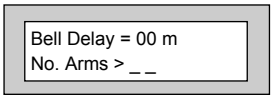
10) Enter the number of minutes you require for the Bell Delay followed by Yes.
The display will show:-



Note: *Bell delay is defaulted to 0 but maybe programmed to a maximum of 10 minutes.*

Be careful when using Bell delay, the Bell will not sound for the period programmed after the the alarm has been activated. Bell Delay used to be a Police requirement but is now not often used in the UK.

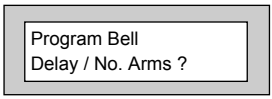
11) Press No.The display will show:-



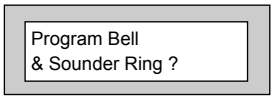
Number of Arms is the number of times the bell is capable of sounding during a Set period. It is normal to set this option to 3 or 4, If left at 99 the number of Arms is infinite.

Note: *If this option is programmed to 0 the bell will not activate.*

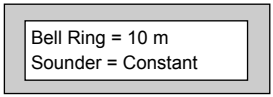
12) Enter the required Number of Arms followed by Yes. The display will show:-



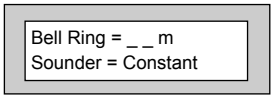
13) Press No. The display will show:-



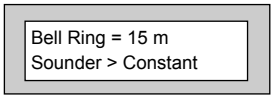
14) Press Yes. The Display will show:-



15) Press No **twice**. The display will show:-



16) Enter the Bell Ring Time you require(in minutes) followed by Yes. The display will show:-



Note: *Bell Ring is defaulted to 10 minutes and is programmable from a minimum of 1 minute to a maximum of 15 minutes.*

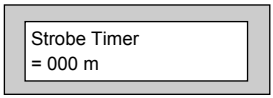
The term Sounder refers to the Internal Speakers fitted to the system and also the speaker(s) fitted to the RKPs

Options available for Sounder are.

Constant Will continue after the Bell Time has elapsed.

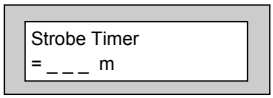
Timed Will Time out with the Bell Time

17) Press No until your required setting is displayed then press Yes. The display will show:-

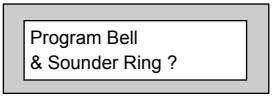


The Strobe light will normally continue after the Bell Time has elapsed. You may Time the Strobe if required. To do so.

18) Press No **twice**. The display will show:-

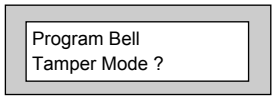


19) Enter the time required (in minutes) followed by Yes. The display will show:-

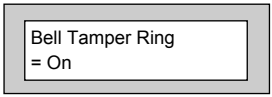


Note: *Strobe Timer is defaulted to 0 minutes but is programmable to a maximum of 120 minutes.*

20) Press No. The display will show:-

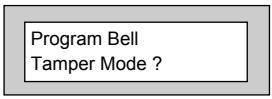


21) Press Yes. The display will show:-

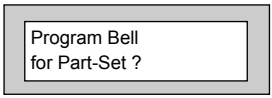


With the Bell Tamper Ring On tampering the Bell Box will also trigger the Bell Output from the control panel. With Bell Tamper Ring of the Bell Trigger from the panel is not activated.

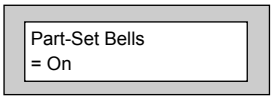
22) Press No until your required setting is displayed then press Yes. The display will show:-



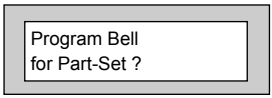
23) Press No. The display will show:-



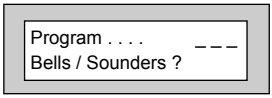
24) Press Yes. The display will show:-



25) Press No until the required setting is displayed then press Yes. The display will show:-

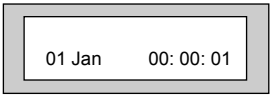


26) This concludes the programming for Bells & Sounders. Press 0 (zero) to return to:-



Or

Press 0 (zero) until the display shows:-



Programming Keypad

Up to 4 RKPs (Remote Keypads) may be fitted to the GT490X control panel on a 4 wire BUS. A four core connection will be required between the control panel and the remote keypad(s), keypads maybe in a "daisy chain" or "star" format

Note: A 680 Ohm resistor must be fitted to ONE RKP. If the RKPs are wired in the "daisy chain" format then this should be the last in the line.

Note: Each keypad must be programmed onto the system in order for it to be recognised by the system.

Note: Depending on the variant of the keypad fitted,external G-Tag Proximity Reader(s) may be fitted to each keypad.

1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-

Program . . . . _ _ _
Zones ?

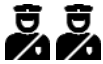
2) Press No **four times**. The display will show:-

Program . . . . _ _ _
Keypad ?

3) Press Yes. The display will show:-

Program Keypad
Alert 1 Keys ?

Alert 1 Keys refers to the PA keys being pressed together or keys 1&3 being pressed together. P&F refers to PA keys.



4) Press Yes. The display will show:-

Alert 1 =Off
1&3 = Off P&F = On

5) Press the No Key to scroll through the settings for Alert 1. When the setting you require is displayed press Yes. The display will show:-

Alert 1 =Off
1&3 > Off P&F = On

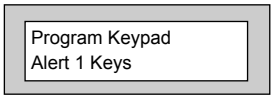
6) Press No. The display will show:-

Alert 1 =Off
1&3 > On P&F = On

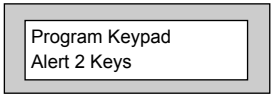
7) Press Yes. The display will show:-

Alert 1 =Off
1&3 = On P&F > On

8) Press Yes. The display will show:-

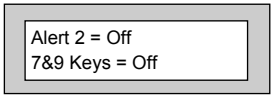


9) Press No. The display will show:-

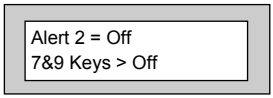


Alert 2 Keys refer to Key 7&9 pressed together.

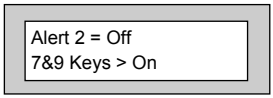
10) Press Yes. The display will show:-



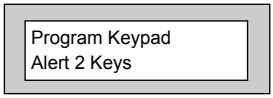
11) Press No until the required setting is displayed then press Yes. The display will show:-



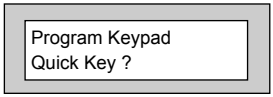
12) Press No. The display will show:-



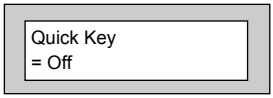
13) Press Yes. The display will show:-



14) Press No. The display will show:-



15) Press Yes. The display will show:-



The available options for the Quick Key are.

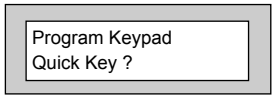
Off The Quick Key is disabled

Quick-Set Reduces the Exit Time after Exit has started.

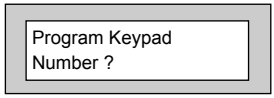
Full-Set Enter user code then Quick Key

Part-Set Enter user code then Quick Key for Part 1 Set

16) Press No until the required setting is displayed then press Yes. The display will show:-

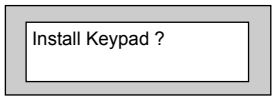


17) Press No. The display will show:-

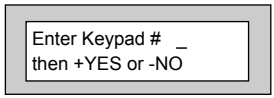


This option is used to program the Number of Keypads you have on the system. It should be noted the there are no jumpers in the RKP to ident them this is done from the program option.

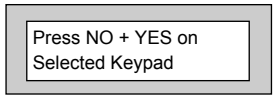
18) Press Yes. The display will show:-



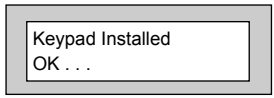
19) Press Yes. The display will show:-



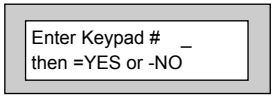
20) Enter the Number of the keypad you wish to program onto the system (1 to 4) then press Yes. The display will show:-



21) Press the No & the Yes buttons together on the selected keypad. The display will show:-

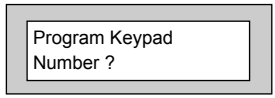


Then:-

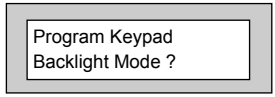


22) Repeat from Step 19 until all the RKPs have ben installed onto the system.

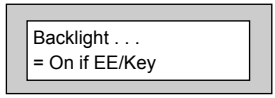
23) Press 0 (zero). The display will show:-



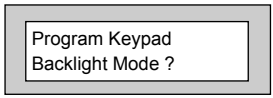
24) Press No. The display will show:-



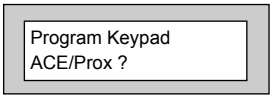
25) Press Yes. The display will show:-



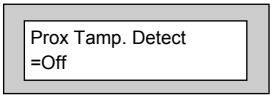
26) Press No until the setting you require is displayed then press Yes. The display will show:-



27) Press No. The display will show:-

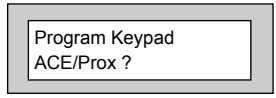


28) Press Yes. The display will show:-

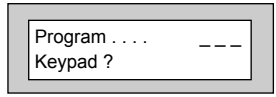


Note: *Use of this option will require a compatible G-Tag RKP. Default is Off, but maybe changed to On. It is intended for use with the external prox reader (E-Reader) and monitors the antenna of the reader for being disconnected.*

29) Press No until the setting you require is displayed then press Yes. The display will show:-

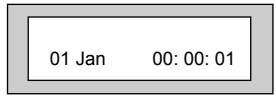


30) This concludes the programming for Keypad. Press 0 (zero) to return to:-



Or

Press 0 (zero) until the display shows:-



Programming Digicom / Vo-Comm Off/On

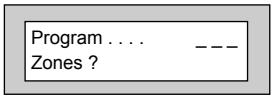
Within this section we will program the Digicom and Modem. Both of these devices are built on the main PCB of the control panel. Only the main functions will be covered within this Step by Step section.

If required, the **5, 5, Yes, No** default may be used to set the basic comms configuration. **When this default is used all other settings that have been programmed will be returned to factory defaults**. When this default is used the following will be set.

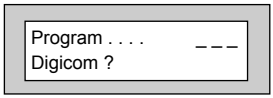
Digicom Type	Mod+F/F
Modem Mode	No Return

This will allow for connection to GardTec Remote for programming functions.

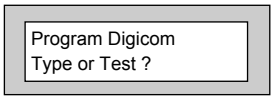
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



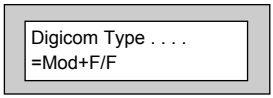
2) Press No **five times**. The display will show:-



3) Press Yes. The display will show:-



4) Press Yes. The display will show:-

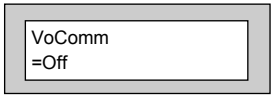


Digicom Types available are.

Mod+F/F	Modem enabled and Ademco Fast Format Central Station protocol enabled.
Mod+SIA	Modem enabled and SIA Central Station protocol enabled.
Mod+PID	Modem enabled and Point ID Central Station protocol enabled.

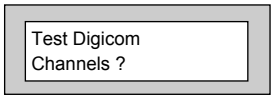
For programming details on PID (Point ID Protocol) and SIA please refer to page 91

5) Press No until the required setting is displayed, then press Yes. The display will show:-

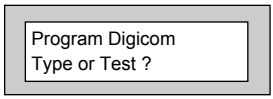


Note: *If **On** is selected, the Vo-Comm menu will now appear in the USER mode. Please refer to GT490X User Guide for further programming information.*

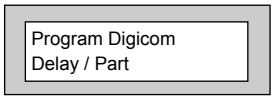
6) Press No until the setting you require is displayed, then press Yes. The display will show:-



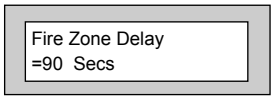
7) Press No. The display will show:-



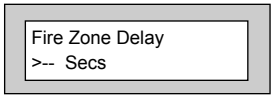
8) Press No. The display will show:-



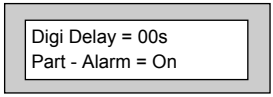
9) Press Yes. The display will show:-



10) Press No **twice**. The display will show:-

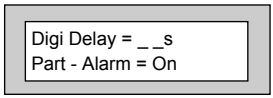


11) Enter the number of seconds you require for the Fire Zone Delay, followed by Yes. The display will show:-

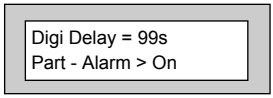


With Digi Delay programmed, the alarm transmission to Central Station will be delayed for the number of seconds programmed.
With Part Alarm programmed to Off there will be no transmission of Alarm, Alarm B or Alarm Abort if the system is Part Set.

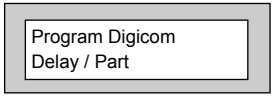
12) Press No **twice**. The display will show:-



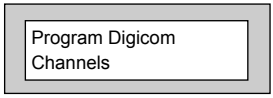
13) Enter the number of seconds you require for the Digi Delay in Part Set followed by Yes. The display will show, for example:-



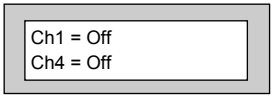
14) Press No until the required setting is displayed, then press Yes. The display will show:-



15) Press No. The display will show:-



16) Press Yes. The display will show:-



When programming Digicom Channels Channel 1 is normally Fire, Channel 2 is normally PA (Panic), Channel 3 is normally Alarm (unconfirmed) and Channel 4 is normally Open/Close.

Channels 5, 6, 7 & 8 will be advised by your Central Station.

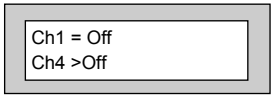
Other signals you may require for BS8243 are.

Alarm Abort
Zone Exclude
Alarm B (Confirmed)

Channel settings available are:
Off
Zone 24Hr
Gen. Tamper
Alert
Fire
Part-Set
Open/Close
Panic
Alarm
Alarm B
Alarm Abort
Power Fail
Watchdog
Mains Fail
PSU Fail
Perimeter
Zone Exclude
Const. Lo-Bat (Radio)
Radio Lost (Radio)
Const. Jam (Radio)
Any Fault
Any Mask
Power Fail Latch.
Global Fault - *This 'Global Fault' is a fast format communication channel option. With a channel programmed as 'Global Fault' the channel will trigger when one of the following faults occur: Mains Fail, PSU Fail, Battery Fault, Line Fault, others...*
Engineer On Site

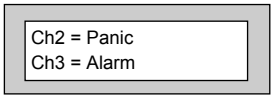
17) Press No until the required setting is displayed.

18) Press Yes. The display will show:-



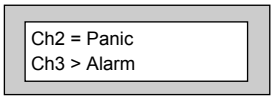
19) Press No until the required setting is displayed.

20) Press Yes. The display will show:-



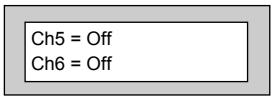
21) Press No until the required setting is displayed.

22) Press Yes. The display will show:-



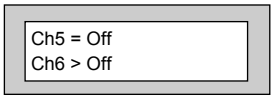
23) Press No until the required setting is displayed.

24) Press Yes. The display will show:-



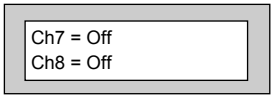
25) Press No until the required setting is displayed.

26) Press Yes. The display will show:-



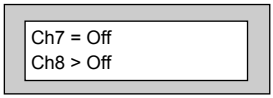
27) Press No until the required setting is displayed.

28) Press Yes the display will show:-



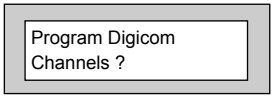
29) Press No until he required setting is displayed.

30) Press Yes. The display will show:-

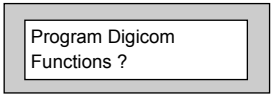


31) Press No until the required setting is displayed.

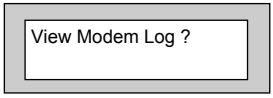
32) Press Yes. The display will show:-



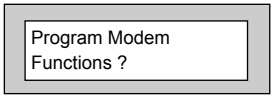
33) Press No. The display will show:-



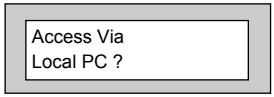
34) Press Yes. The display will show:-



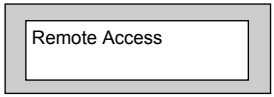
35) Press No. The display will show:-



36) Press Yes. The display will show:-

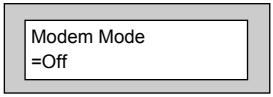


37) Press Yes if you require connection to a local PC. The display will show:-



Otherwise

38) Press No. The display will show:-



Choose from the following settings.

No Return Communication to the panel is from GardTec Remote via Patch Lead or PC Modem.

Return PC The panel will ring the PC back on the number the PC has passed to the panel.

Return #1 or #2 The panel will ring back the PC on the #1 or #2 number programmed into the panel.

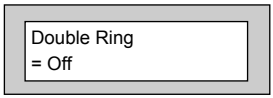
Return #1 Only The panel will ring back the PC on the #1 number programmed into the panel.

Return #2 Only The panel will ring back the PC on the #2number programmed into the panel.

From Site Only Remote Access will be initialised by the user On-Site.

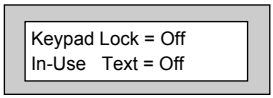
Off Modem Functions are disabled.

39) Press No until the required setting is displayed, then press Yes. The display will show:-



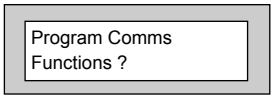
This option may be used when when the panel is on a shared line and GardTec Remote is also used.

40) Press No until the required setting is displayed, then press Yes. The display will show:-

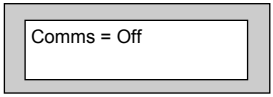


You may continue to program other Modem options if required. For the purpose of this Step by Step section.

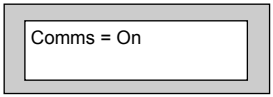
41) Press 0 (zero). The display will show:-



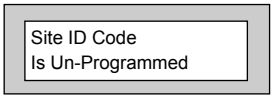
42) Press Yes. The display will show:-



43) Press No **twice**. The display will show:-

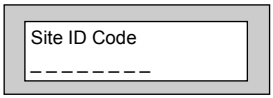


44) Press Yes. The display will show for example:-

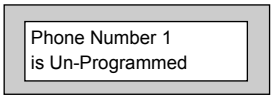


In the UK the Site ID Code is normally a four digit number, your Central Station may have supplied you with a six digit number. If this is so please use the last four digits.

45) Press No. The display will show:-

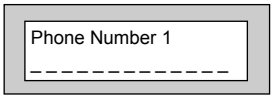


46) Enter your Site ID Code followed by Yes.
The display will show:-

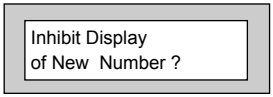


We will be entering two Phone Numbers. If your Central Station has only supplied you with one Phone Number please use the same one twice.

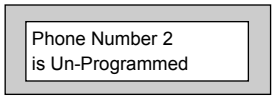
47) Press No. The display will show:-



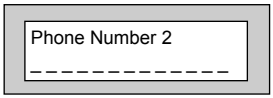
48) Enter Phone Number one followed by Yes.
The display will show:-



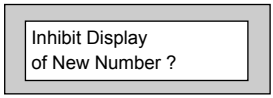
49) Press Yes. The Display will show:-



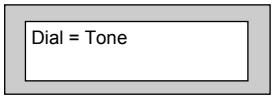
50) Press No. The display will show:-



51) Enter Phone Number 2 followed by Yes.
The display will show:-

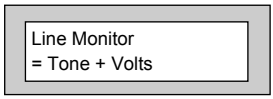


52) Press Yes. The display will show:-



This option refers to the line mode of the telephone line. In the UK most telephone lines are Tone Dial.

53) Press No until the required setting is displayed, then press Yes. The display will show:-



Settings available for Line Monitor are.

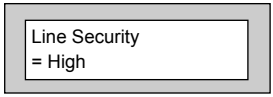
Tone + Volts The Line Monitor will check the Dial Tone and the Line Voltage **This setting should be used when the control panel is connected to a dedicated telephone line.**

Off Line Monitor is turned Off

Dial Tone The Line Monitor will only monitor the Dial Tone. **This setting should only be used on a dedicated telephone line.**

Line Volts Then Line Monitor will monitor the Line Voltage. **This setting should be used when the control panel is connected to a telephone line that has other telephone equipment on it (shared line).**

54) Press No until the required setting is displayed then press Yes. The display will show:-

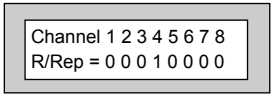


Settings available for Line Security are:-

High The Line Voltage is monitored at a High Level. **This setting should be used on dedicated lines only.**

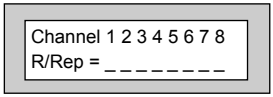
Low The Line Voltage is monitored at a Low Level. **This setting should be used when the control panel is sharing the line with other telephone equipment.**

55) Press No until the required setting is displayed then press Yes. The display will show:-

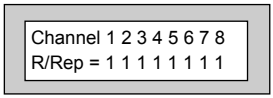


This option determines what Digi Channels will send a Restore Signal to Central Station when the system is Reset. Most Central Stations will require a Restore Report for all channels.

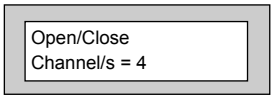
56) Press No. The display will show:-



57) Enter **eight** ones so the display shows:-



58) Press Yes. The display will show:-

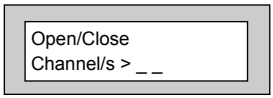


Channel 4 normally needs an inversion of the signal that is sent to Central Station. By having 4 as the setting for this option channel 4 will be inverted. If you have reports from the Central Station that the Open/Close channels are the wrong way around proceed as follows to remove the inversion on the control panel.

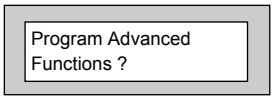
59) If you do not need to change this option press Yes and jump to Step 61.

Or

To change the setting. Press No.
The display will show:-

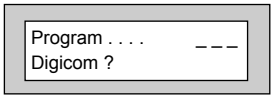


60) Press 0 followed by Yes. The display will show:-



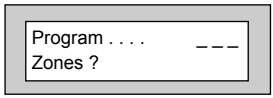
You may continue to program other Advanced options if required. For the purpose of this Step by Step section.

61) Press 0 (zero) **three** times. The Display will show:-

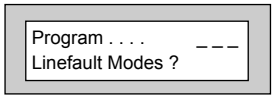


Programming Linefault Modes

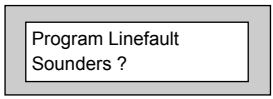
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



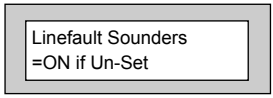
2) Press No **six times**. The display will show:-



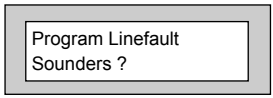
3) Press Yes. The display will show:-



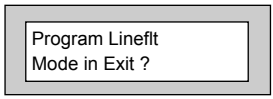
4) Press Yes. The display will show:-



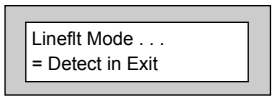
5) Press No until the required setting is displayed then press Yes. The display will show:-



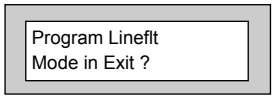
6) Press No. The display will show:-



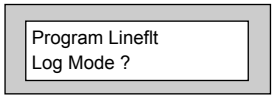
7) Press Yes. The display will show:-



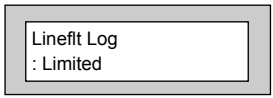
8) Press No until the display shows the required setting then press Yes. The display will show:-



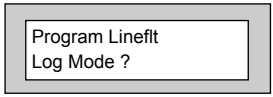
9) Press No. The display will show:-



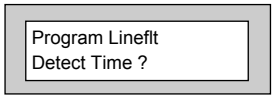
10) Press Yes. The display will show:-
Note: *Line Fault is defaulted to Limited and may not be changed. This limit is set to 3 events.*



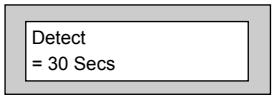
11) Press Yes. The display will show:-



12) Press No. The display will show:-

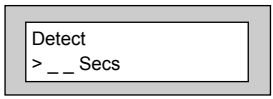


13) Press Yes. The display will show:-

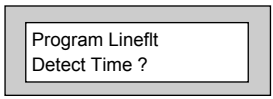


With Detect programmed as 00 Linefault detection is instant or it may be delayed if required.

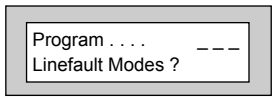
14) Press No twice. The display will show:-



15) Enter the time you require (in seconds) followed by Yes. The display will show:-

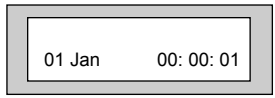


16) This concludes the programming for Linefault Sounders. Press 0 (zero) to return to:-



Or

Press 0 (zero) until the display shows:-



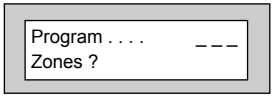
For information on Linefault Sounders refer to page 93

Programming Panic

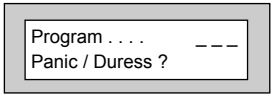
Note: Duress is defaulted to Off and cannot be changed. Duress 7 is now no longer available.

You should also check current legislation if Panic signals are allowed for the grade of system that you are fitting.

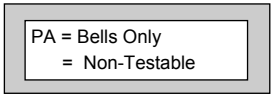
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



2) Press No **seven times**. The display will show:-



3) Press Yes. The display will show:-

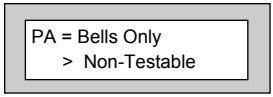


It should be noted that with PA = Bells Only no PA signals will be sent to Central Station.

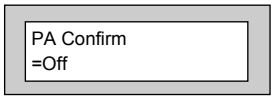
Available setting for PA are

Bells Only	Activating a Panic will only sound the Bells.
Bells Always	Activating a Panic will Sound the Bells and send a signal to Central Station provided that a Digi Channel is programmed as Panic.
Silent Always	Activating a Panic will only send a signal to Central Station providing that a Digi Channel has been programmed as Panic.
Bells if LFlt	As Silent Always but will revert to Bells if a Linefault is present.

4) Press No until the required setting is displayed then press Yes. The display will show:-



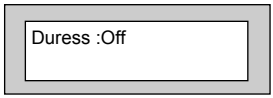
5) Press No until the required setting is displayed then press Yes. The display will show:-



Please note that **Confirmed PA** can only be produced by activating two zones programmed as panic or a keypad panic and a Panic zone.

If Mod + FF tis used the Alarm B channel will be transmitted for PA/Intruder confirmation.
If Mod + PID is used the confirmed PA will transmit E129.
If Mod + SIA is used the confirmed PA will transmit HV.

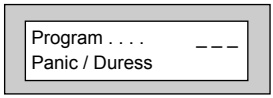
6) Press Yes. The display will show:-
Note: *Duress is defaulted to Off and cannot be changed.*

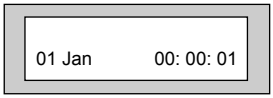


7) This concludes the programming for Panic. Press 0 (zero) to return to:-

Or

Press 0 (zero) until the display shows:-





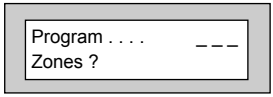
Programming PGM2 / 3 / Timers

PGM2 refers to the PGM2 terminal on the control panel PCB situated near to the RKP terminals.

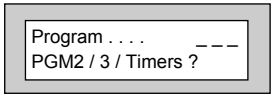
PGM3 Refers to the Strobe terminal, if this is not used for the Strobe (for example if a NovActive Bell Box is used) it may be re-programmed for other uses.

One Timer is also available. It should be noted that the times programmed will operate seven days per week, you are not able to program separate time for weekends etc.

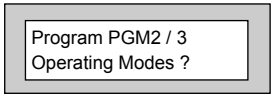
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



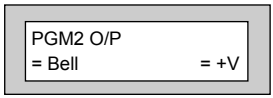
2) Press No **eight times**. The display will show:-



3) Press Yes. The display will show:-



4) Press Yes. The display will show:-



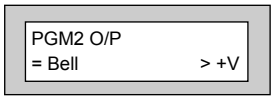
Options available for PGM2 / 3 are.

Bell
Strobe
Latch Any
Any Digi
Status
Perimeter
Zone Exclude
Custom 1 to 8
Int. Sounder
E/E
Timed 1
Alert

cont-

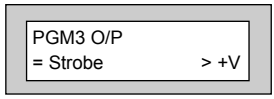
Alarm B	(Confirmed)
Alm Abort	(Alarm Abort)
Any Fire	
Any Panic	
Gen. Tamper	(General Tamper)
Zone - 24Hr	
Power Fail	
Power OK	
Const. LoBat	(Radio Low Battery)
Radio Lost	(Lost Radio Detector etc.)
Const.Jamm.	(Radio Signal Jamming)
Any Fault	
Any Mask	
Watchdog	
Off	
Pulse Off	
Pulse On	
Any Set	
Alarm	(Unconfirmed)
After Alarm	
Open / Close	
Pulse Set	
Part Set	
Walktest	
Mains Fail	

5) Press No until the required setting is displayed then press Yes. The display will show for example:-

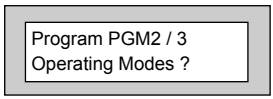


With the PGM2 programmed as Bell the output will operate with the Bell when this is set as +V. With this set as -V the output will be inverted e.g On, turning Off with the Bell.

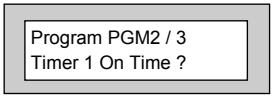
6) Press No until the required setting is displayed then press Yes. The display will show:-



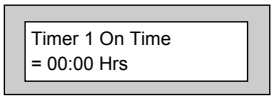
7) Press No until the required setting is displayed then press Yes. The display will show:-



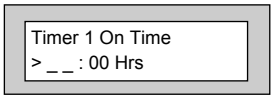
8) Press No. The display will show:-



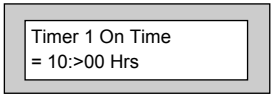
9) Press Yes. The display will show:-



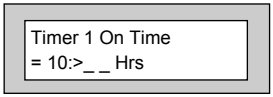
10) Press **twice** No. The display will will show:-



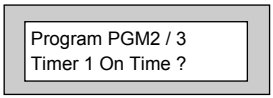
11) Enter the On Time hours followed by Yes.
The display will show:-



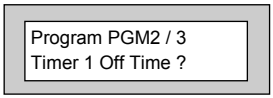
12) Press No. The display will show:-



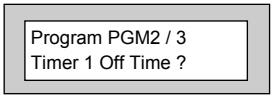
13) Enter the On Time minutes followed by Yes.
The display will show:-



14) Press No. The display will show:-
Repeat for Timer 1 Off Time

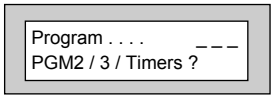


15) Press Yes. The display will Show:-



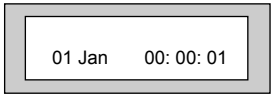
16) This concludes the programming for PGM2/3/Timer

17) Press 0 (zero) to return to:-



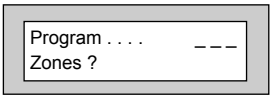
Or

Press 0 (zero) until the display shows:-

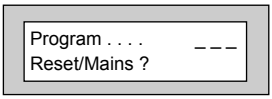


Programming Reset Modes

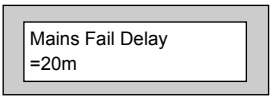
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



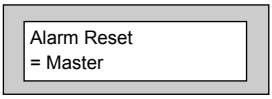
2) Press No **nine times**. The display will show:-



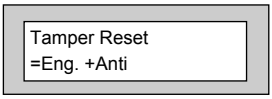
3) Press Yes. The display will show:-



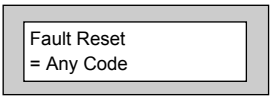
4) Press No **twice**, then enter the Mains Fail Delay time you require.Then press Yes. The display will show:-
Note: *Default is set at 20 minutes. Will delay the display and the necessity to reset a mains fault for the time programmed.*



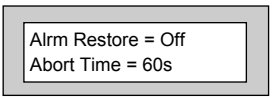
5) Press No until the required setting is displayed. Then press Yes. The display will show:-



6) Press No until the required setting is displayed. Then press Yes. The display will show:-

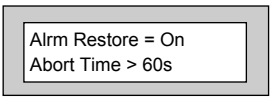


7) Press No until the required setting is displayed. Then press Yes. The display will show:-

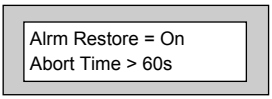


When Alarm Restore is turned On the Digi channels programmed with Restore On will be restored when the system is unset rather than when the system is Reset.

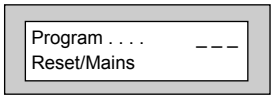
8) Press No until the required setting is displayed then press Yes. The display will show for example:-



9) Press No. The display will show:-

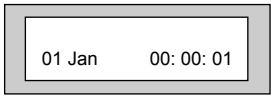


10) Press No until the required abort time is set followed by Yes. (0-180 seconds in increments of 20 seconds). The display will show:-



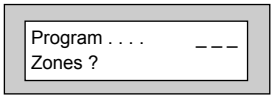
11) This concludes the programming for Reset Modes.

12) Press 0 (zero) until the display shows:-

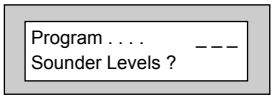


Programming Sounder Levels

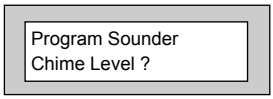
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



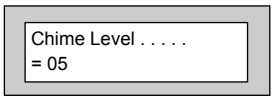
2) Press No **ten times**. The display will show:-



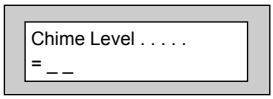
3) Press Yes. The display will show:-



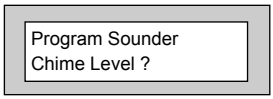
4) Press Yes. The display will show:-



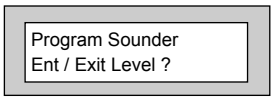
5) Press No **twice**. The display will show:-



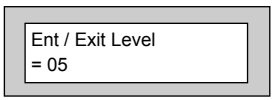
6) Enter a value 1 to 9 (1=Low 9=High) followed by Yes. The display will show:-



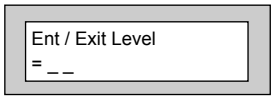
7) Press No. The display will show:-



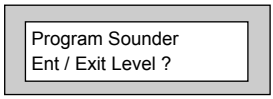
8) Press Yes. The display will show:-



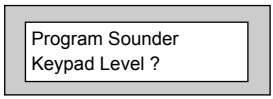
9) Press No **twice**. The display will show:-



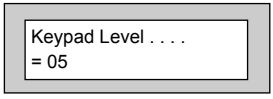
10) Enter a value 1 to 9 (1= Low 9 = High) followed by Yes. The display will show:-



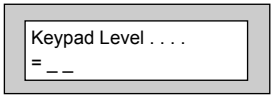
11) Press No. The display will show:-



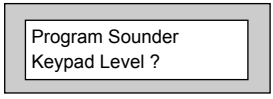
12) Press Yes. The display will show:-



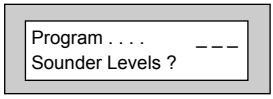
13) Press No **twice**. The display will show:-



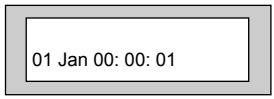
14) Enter a value 1 to 9 (1 = Low 9 = High) followed by Yes. The display will show:-



15) This concludes the program Sounder Levels press 0 (zero) to move back to:-



Then Press 0 **twice** to move back to:-

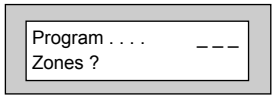


Programming PGM1 / Custom

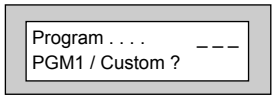
PGM1 is located on the control panel PCB close to the Bell terminals.

Up to 8 custom outputs may be programmed on to PGM 1 to 3. A custom output may be used so that the output can follow a zone or a user code.

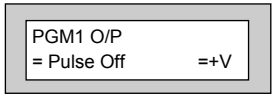
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



2) Press No **eleven times**. The display will show:-

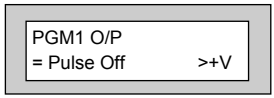


3) Press Yes. The display will show:-



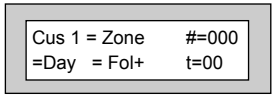
The options available for PGM1 are shown on page 62.

4) Press No until the required setting is displayed then press Yes. The display will show:-

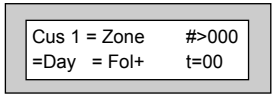


With the PGM2 programmed as Bell the output will operate with the Bell when this is set as +V. With this set as -V the output will be inverted e.g On, turning Off with the Bell.

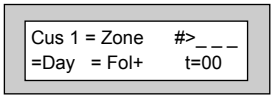
5) Press No. until the required setting is displayed then press Yes. The display will show:-



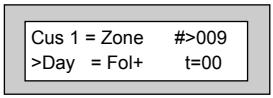
6) Press No to change the Cus 1 to Zone, Code or Group as required to follow. Press Yes.
The display will show:-



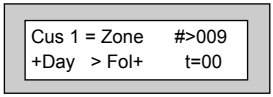
7) Press No. The display will show:-



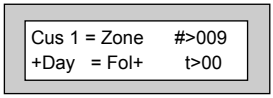
8) Enter the Zone Number or Customer Number that you wish the output to follow then press Yes. The display will show for example:-



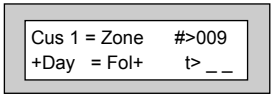
9) Press No to select when you want the output to operate followed by Yes. The display will show:-



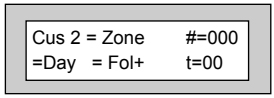
10) Press No until the mode you require is displayed then press Yes. The display will show:-



11) Press No. The display will show:-

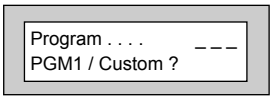


12) Enter the time required followed by Yes. The display will show:-

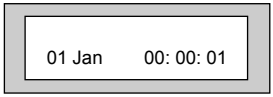


The t = 00 setting only applies to Fol+ Fol- Pul+ Pul-

13) Repeat Steps 5 to 13 until all the Custom Outputs you require have been programmed. When you have programmed Custom 8 the display will show:-

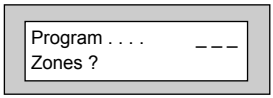


14) Press 0 (zero) until the display shows:-

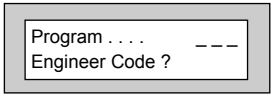


Programming Engineer Code

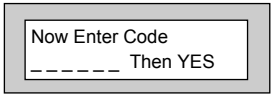
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



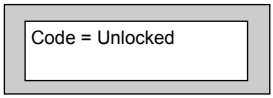
2) Press No **twelve times**. The display will show:-



3) Press Yes. The display will show:-

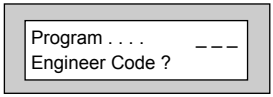


4) Enter your New Engineer Code (4, 5 or six digits) followed by Yes. The display will show:-

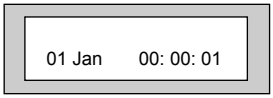


Be careful if you lock your code in. If the code is forgotten you may have to return the control panel to the factory to have it unlocked, this will be a chargeable service.

5) Press No until the required setting is displayed then press Yes. The display will show:-



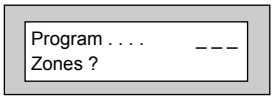
6) This concludes the Program Engineer Code
Press 0 (zero) **twice** to return to:-



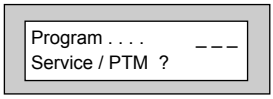
Programming Service

Within this section you will program the Service Timer. Also, if required, uploading / downloading data to the control panel via the PTM (Program Transfer Module). The Service Timer has the ability to Lock a user out of the system when the Service Time expires. Trading Standards may take action if a Lockout occurs and no Service Contract exists. Please use with care.

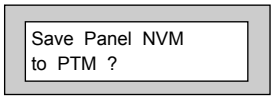
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



2) Press No **thirteen times**. The display will show:-



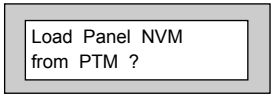
3) Press Yes. The display will show:-



4) Press Yes if you require to save to PTM

Otherwise

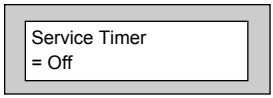
5) Press No. The display will :-



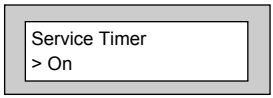
6) Press Yes if you require to load from the PTM

Otherwise

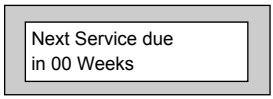
7) Press No. The display will show:-



8) Press No **twice**. The display will show:-



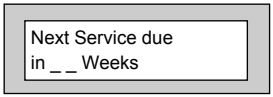
9) Press Yes. The display will show:-



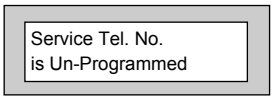
Note: To transfer data to and from the PTM, a cable (part number 04-091) will be required. Cut off the BLUE plug at one end and wire to the RS485 terminal block on the GT490X control panel PCB following the colour code. Connect the other end to the PTM.

Note: When data transfer is in progress, the LED on the PTM will flash rapidly.

10) Press No **twice**. The display will show:-

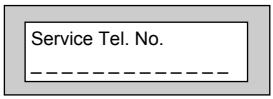


11) Enter the number of weeks you require to the next Service then press Yes.
The display will show:-

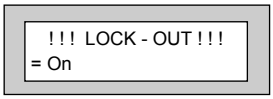


Note: The system will start to warn the end user that the Service is due two weeks before the time expires.

12) Press No. The display will show:-



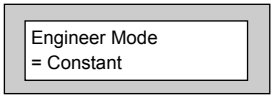
13) Enter the Telephone Number you wish your customer to dial for service followed by Yes.
The display will show:-



With Lock - Out turned On the system will Lock the users out when the Service Time expires.

With Lock - Out turned Off the system will continue to warn of Service until the Service Timer is reset.

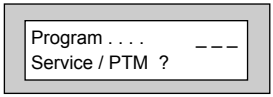
14) Press No until the required setting is displayed then press Yes. The display will show:-



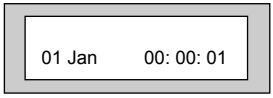
With Engineer Mode programmed as Constant the panel will remain in Engineer Mode until the Engineer exits.

With Engineer Mode programmed as timed the panel will jump out of Engineer Mode after 1 hour if all the Tampers are clear. This prevents the Engineer accidentally leaving the panel in Engineer Mode.

15) Press No until the required setting is displayed then press Yes. The display will show:-

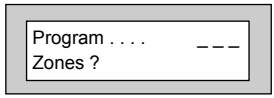


16) This concludes the Program Service
Press 0 (zero) **twice** to return to:-

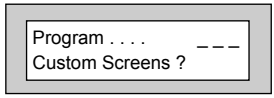


Programming Custom Screens

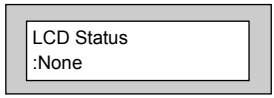
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



2) Press No **fourteen times**. The display will show:-

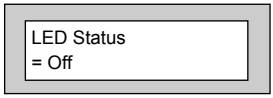


3) Press Yes. The display will show:-



Note: *The LCD Status is defaulted to None and may not be changed. The display will only show the Set / Unset status of the system for ten seconds after a Set or Unset.*

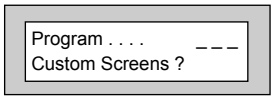
4) Press Yes. The display will show:-



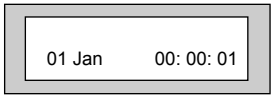
The LED Status refers to the LED in the G-Tag 'E' or 'I' reader. Choose from:-

Off	The reader LED will only show for ten seconds after a Set / Unset
On	The reader LED will always be active.

5) Press No until the setting you require is displayed then press Yes. The display will show:-



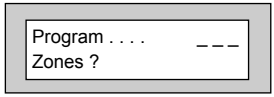
6) This concludes the Program Service
Press 0 (zero) **twice** to return to:-



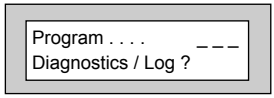
Programming Diagnostics / Log

The GT490X control panel has some limited diagnostic features available to the engineer. To access these proceed as follows.

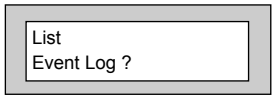
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



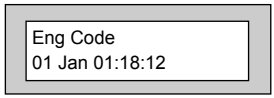
2) Press No **fifteen times**. The display will show:-



3) Press Yes. The display will show:-



4) Press Yes if you wish to view the Event Log
The display will show for example:-

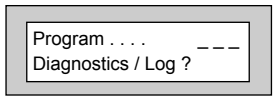


This is the last event in the Log

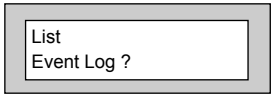
Use the No key to move backward in the Log

Use the Yes key to move forward in the Log

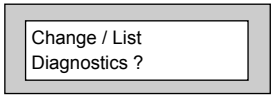
5) When you have finished viewing the Log press 0 (zero). The display will show:-



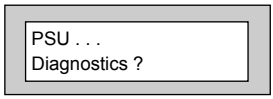
6) Press Yes. the display will show:-



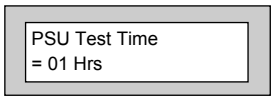
7) Press No. The display will show:-



8) Press Yes. The display will show:-

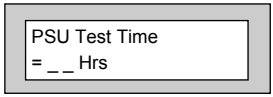


9) Press Yes. The display will show:-

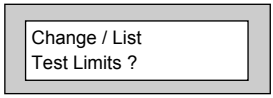


A PSU/Battery test will be carried out at the time interval set here and each time you leave Engineer Mode. This may be turned Off by setting the Time interval to 0 (zero).

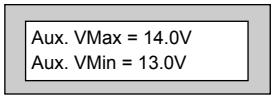
10) Press No **twice**. The display will show:-



11) Enter the time you require (in hours) followed by Yes. The display will show:-

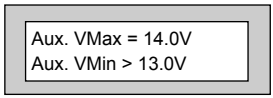


12) Press Yes. The display will show:-

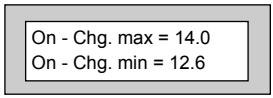


In this example any voltage over 14V or below 13V will create a warning when the PSU test is performed by the system.

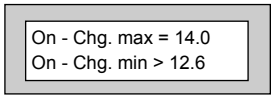
13) To change these limits. Press No until the required setting for V.Max is displayed then press Yes. The display will show:-



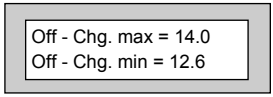
14) Press No until the setting required for V.Min is displayed then press Yes.
The display will show:-



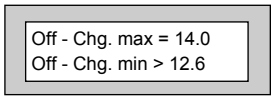
15) Press No until the required setting for On-Charge Volts max (Battery) is displayed then press Yes.
The display will show:-



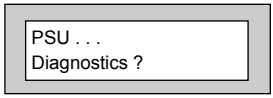
16) Press No until the required setting for On-Charge Volts min (Battery) is displayed then press Yes.
The display will show:-



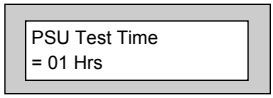
17) Press No until the required setting for Off-Charge Volts max (Battery) is displayed then press Yes.
The display will show:-



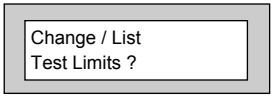
18) Press No until the required setting for Off-Charge Volts min (Battery) is displayed then press Yes.
The display will show:-



19) Press Yes. The display will show:-

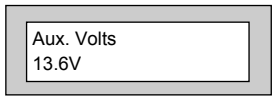


20) Press Yes. The display will show:-

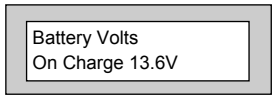


The readings given from this point on are intended as Indicator Only and should be confirmed with a calibrated Test Meter.

21) Press No. The display will show for example:-

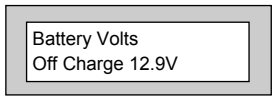


22) Press Yes. The display will show for example:-

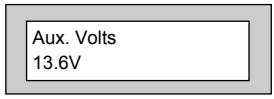


23) Press Yes. The display will show:-

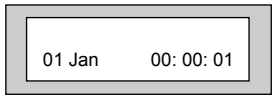
The backlight will Dim at this point.



24) Press Yes. The display will show:-



25) This concludes the Program Diagnostics
Press 0 (zero) until the display shows:-



Programming Alarm Confirm

This section is used to program options that are relevant to BS8243. Before programming these options please take time to read the following notes that will help in your understanding of BS8243

All communications systems that require a Police URN will need to conform to BS8243.

These notes intended as a guide only and should be read in conjunction with the relevant standards relating to the alarm system giving particular attention to EN50131-1and BS8243. These may be obtained from the British Standards Institute.

BS8243 options available are.

Confirm Time Window (default = 60)
This time window may be programmed between 1 and 120 minutes. To comply the required time should be between 30 and 60 minutes.

Confirm on Entry (default = On)
This option may be programmed to On or Off. If Confirm on Entry = Off then confirmed alarms to central station are disabled if the entry timer is started. If ACE or G-Tag is used then it is permissible to set this option to On.

Sounder Mode (default = Unconfirmed)
This option controls the system speakers fitted, options are confirmed or un-confirmed.
If Sounder Trigger = Confirmed then internal sounder will only trigger with a confirmed alarm.
If Sounder Trigger = Unconfirmed then internal sounders will trigger with un-confirmed alarms.
This feature is not mandatory for BS8243

Reset Mode (default = Any)
Choose from Any or Normal.
If Unconfirm = Any then any code can be used to reset an un-confirmed alarm.
If Unconfirm = Normal then the programmed reset mode for alarm will still be required i.e. if alarm reset has been programmed as engineer and Unconfirm reset is Normal then an engineer reset will be required for Un-confirmed alarms.

Confirm Secondary Time Window (default = 60 minutes)
This time window may be programmed between 1 and 120 minutes we would suggest a time between 30 and 60 minutes but should typically be the same time as the confirm time window. This option affects zones that have been allocated as secondary zones only. For functionality please refer to Secondary Zones Below.

ET (Exit Terminator) Mode (default = Set)
If ET Mode = Set then the exit terminator zone will terminate the exit procedure.
If ET Mode = Door Lock and the ET zone (door lock) is operated on entry then all confirmed alarms will be disabled.

Bell Mode (default = Unconfirmed)
This option controls the bells fitted to the system, options are confirmed or un-confirmed.
If Bell Trigger = Confirmed then Bell will only trigger with a confirmed alarm.
If Bell Trigger = Unconfirmed then Bell will trigger with un-confirmed alarms.
This feature is not mandatory for BS8243

Strobe Mode (default = Unconfirmed)
This option controls the Strobe(s) fitted to the system, options are confirmed or un-confirmed.
If Strobe Trigger = Confirmed then Strobe will only trigger with a confirmed alarm.
If Strobe Trigger = Unconfirmed then Strobe will trigger with un-confirmed alarms.
This gives the ability to show to the keyholder from outside the premises that a previously unconfirmed alarm has is now confirmed.
This feature is not mandatory for BS8243

Confirmed Start Delay (default = 000m)
May be programmed between 0 & 120 minutes (default 0).
If programmed to anything other than 0 the panel cannot send confirmed signals until the time programmed has expired. This time starts when the system has set and will prevent confirmed alarms being generated in situations when a person has been accidentally locked in the building.
This feature is not mandatory for BS8243

Ace Low Battery (default = On)
Options are On or Off. This option allows for the use of new control panel boards with V5.1 or later software to be used with earlier keypads. If older non BS8243 compliant type keypads are used with V5.1 or later this option should programmed to Off. It is a requirement of BS8243 that when using ACE Low Battery is reported to the end user if the system is set using ACE.
See BS8243 Portable ACE used for setting and unsetting.

Secondary Zones
The Program Part / Test /Chime option has now been renamed to Program Zone Attributes. Within this section you are able to allocate zones as Secondary Zones. Secondary type zones would be used for detectors that may be deemed as having an over sensitive nature, this will stop unwanted user call-outs. Zones that are entered as Secondary will follow the chain of events below.

During a set period triggering a Secondary Zone will start the Secondary Time Window. This will be logged but no further action is taken. If the second zone to alarm during the same set period is also a Secondary Zone then it will be logged and the Secondary Time Window will be restarted.

If the time set within the Secondary Time Window is still running and a zone that is not allocated as a Secondary Zone is triggered the event will be logged an Alarm A (un-confirmed) and Alarm B (confirmed) will be transmitted.
This feature is not mandatory for BS8243.

Comms Restore
With Comms Restore turned on any outstanding alarm channels will be restored at the end of the Confirm Time Window.
This feature is mandatory for BS8243

Perimeter Zones
Within the Program Zone Attribute section you are able to allocate zones as Perimeter. Zones that are entered as Perimeter will follow the chain of events below.

When activated an unconfirmed alarm will be transmitted to the central station. An output or digi channel may be programmed as perimeter (or if using Point ID a new signal type of perimeter will be sent). This will allow central station to inform the keyholder that an unconfirmed alarm has been received and is a perimeter type device i.e window backdoor etc. etc. This feature is not mandatory for BS8243.

Scenarios Relating to BS8243.

Sounder / Bell Considerations
Please note careful consideration should be given when programming Confirm Sounder and Confirm Bell Modes. If both are programmed for confirmed and any of the above scenarios occur no local sounders will activate.

Other BS8243 Notes to Consider

When a system auto re-arms with a zone in fault condition The GardTec control panel will omit the zone concerned. A signal should be sent to the central station indicating that a detector(s) has (have) been isolated. To achieve this a Digi channel should be programmed as Zone Exclude, this will automatically send the required signal as the detector is omitted.

Output Option (Status)

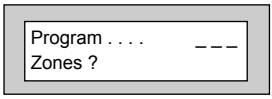
This option has three operating modes and is intended to provide a visual indication of the system status.

System Set	Output On for 10 seconds
System Unset	Output On for 1s Output Off for 1s for a 10 second period
Confirmed Alarm	Output On for 3 seconds Output Off for 1s until system reset.

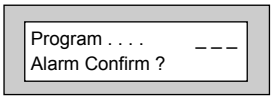
It is envisaged that this status output would be fitted to an indicator (i.e. LED) that can be seen from outside the premises.

Programming Alarm Confirm

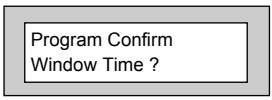
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



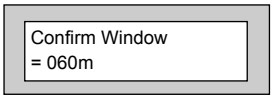
2) Press No **sixteen times**. The display will show:-



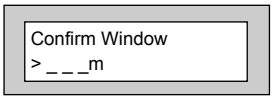
3) Press Yes. The display will show:-



4) Press Yes. The display will show:-



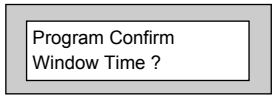
5) Press No **twice**. The display will show:-



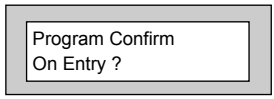
6) Enter the time you require followed by Yes.

The time **MUST** be between 30 & 60 minutes

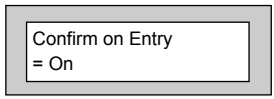
7) The display will show:-



8) Press No. The display will show:-

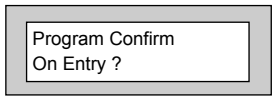


9) Press Yes. The display will show:-

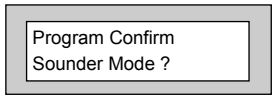


Confirm on Entry may be On only if you are using an ACE device to Unset the system.

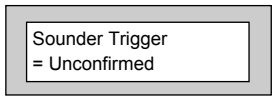
10) Press No until the required setting is displayed then press Yes. The display will show:-



11) Press No. The display will show:-

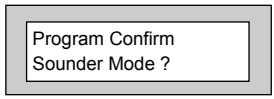


12) Press Yes. The display will show:-

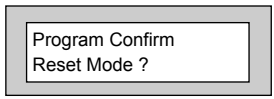


The term Sounder relates to the system speaker(s)

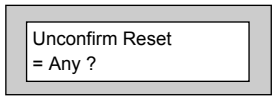
13) Press No until the required setting is displayed then press Yes. The display will show:-



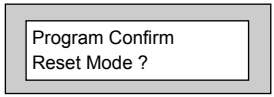
14) Press No. The display will show:-



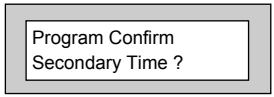
15) Press Yes. The display will show:-



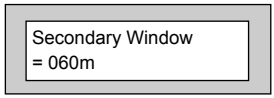
16) Press No until the required setting is displayed then press Yes. The display will show:-



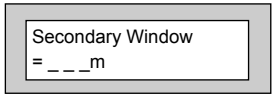
17) Press No. The Display will show:-



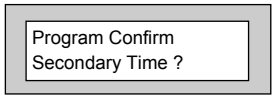
18) Press Yes. The display will show:-



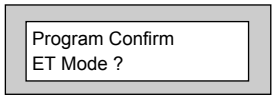
19) Press No **twice**. The display will show:-



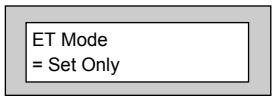
20) Enter the time required then press Yes. The display will show:-



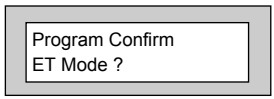
21) Press No. The display will show:-



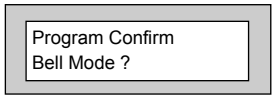
22) Press Yes. The display will show:-



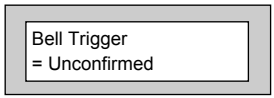
23) Press No until the required setting is displayed then press Yes. The display will show:-



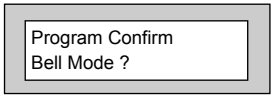
24) Press No. The display will show:-



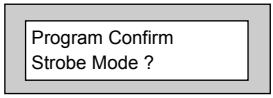
25) Press Yes. The display will show:-



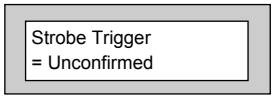
26) Press No until the required setting is displayed then press Yes. The display will show:-



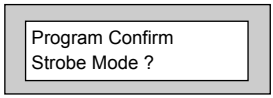
27) Press No. The display will show:-



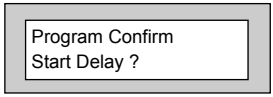
28) Press Yes. The display will show:-



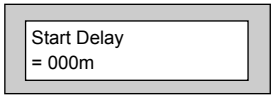
29) Press No until the required setting is displayed then press Yes. The display will show:-



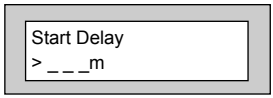
30) Press No. The display will show:-



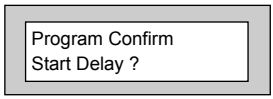
31) Press Yes. The display will show:-



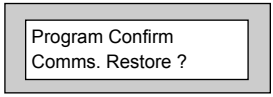
32) Press No **twice**. The display will show:-



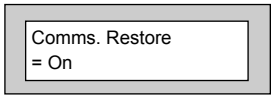
33) Enter the time required followed by Yes. The display will show:-



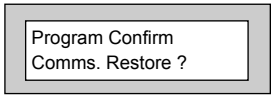
34) Press No. The display will show:-



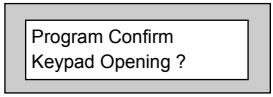
35) Press Yes. The display will show:-



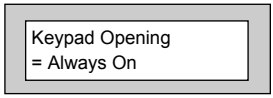
36) Press No until the required setting is displayed then press Yes. The display will show:-



37) Press No. The display will show:-



38) Press Yes. The display will show:-

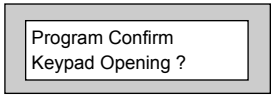


Always On = Keypad is always active.

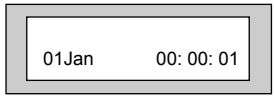
Off in Entry = Keypad is disabled during Entry Time.

Of in Ent/Alm = Keypad is disabled during Entry time or if Entry Time goes through into Alarm.

39) Press No until the required setting is displayed then press Yes. The display will show:-



40) This concludes the Program Diagnostics Press 0 (zero) **three times** to return to:-



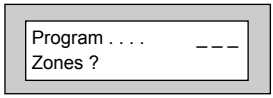
NovActive Description & Programming

NovActive utilises a four core bus to the NovActive sounders that are fitted to the system. This allows each individual Bell to to programmed and also gives access to unique Diagnostic Features that allow the individual NovActive sounders to be diagnosed from either the control panel or via GardTec Remote PC Software. GardTec Remote may be used from either a remote location via a Modem or on-site via a GardTec Modem Patch Lead.

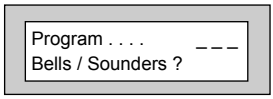
To program the NovActive sounder(s) please follow the instructions below.

Wiring of the NovActive should be carried out in conjunction with the instructions supplied with the unit.

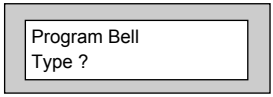
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



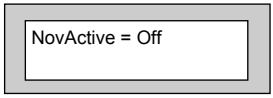
2) Press No **three times**. The display will show:-



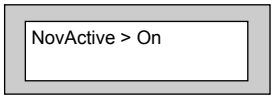
3) Press Yes. The display will show:-



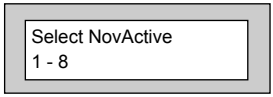
4) Press Yes. The display will show:-



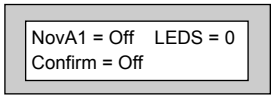
5) Press No **twice**. The display will show:-



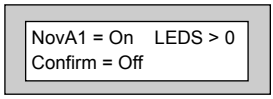
6) Press Yes. The display will show:-



7) Press the number of the NovActive you wish to program. The display will show:-

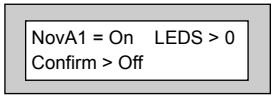


8) Press No **twice** to turn NovActive 1 On. Then press Yes. The display will show:-

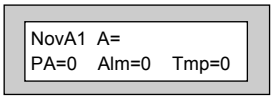


To program the LED pattern press No until the setting required is displayed.
Choose from.
0 = Alternating LEDs
1 = 1 Static LED
2 = 2 Pulsing LEDs
3 = No LEDs

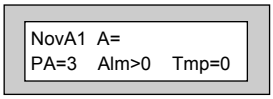
9) When you are happy with your selection press Yes. The display will show:-



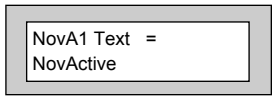
To program the Setting Confirmation press No until the required setting is displayed then press Yes. The display will show:-



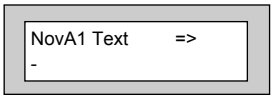
10) To programme the sound, press No until the required setting is displayed, then press Yes. The display will show, for example:-



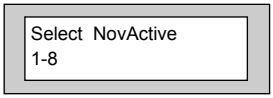
11) Repeat for Alm, Tmp until the required settings are displayed.Then press Yes. The display will show:-



12) Press No. The display will show:-



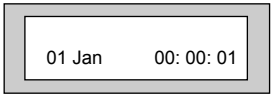
13) Enter the text required. *E.g. Front Wall Bell*. Then press Yes. The display will show:-



***Note**: See Page 21 for entering text instructions.*

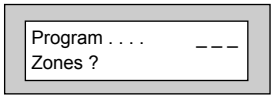
You should now repeat until all the NovActives on the system have been programmed.

14) When you have finished programming all the NovActives press 0 until the display shows:-

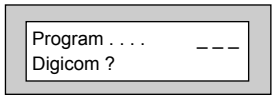


Programming Point ID & SIA Protocols

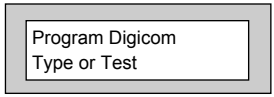
1) Enter into Engineer Mode
To do this follow Steps 1 to 4 on page 18
With the display showing:-



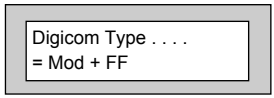
2) Press No **five times**. The display will show:-



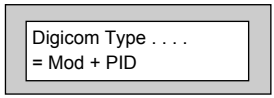
3) Press Yes. The display will show:-



4) Press Yes. The display will show, for example:-

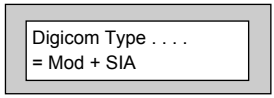


5) Press No until the display shows:-

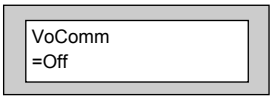


Or:-

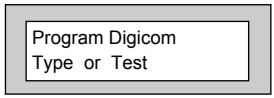
As required



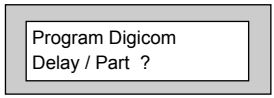
6) Press Yes. The display will show:-



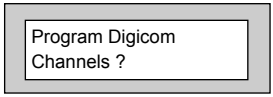
7) Press No until the setting you require is displayed.
Then press Yes. The display will show:-



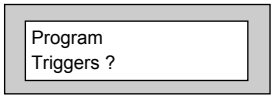
8) Press No. The display will show:-



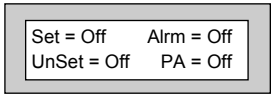
9) Press No. The display will show:-



10) Press Yes. The display will show:-

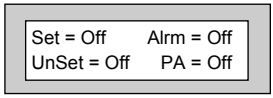


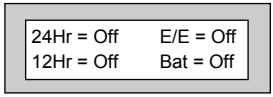
11) Press Yes the display will show:-

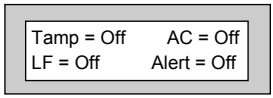


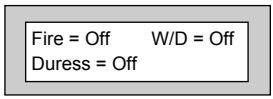
You MUST turn On the Triggers you require.

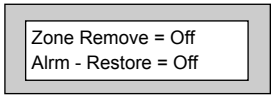
12) Use the Yes & No keys to accept or change the options on the following screens:-

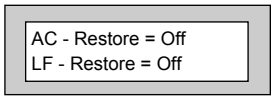


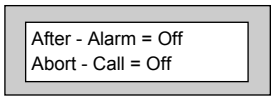


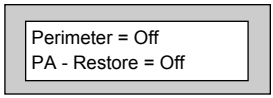


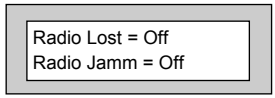


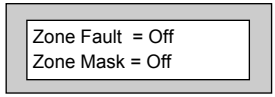


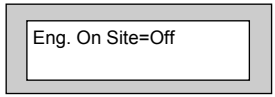




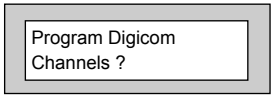




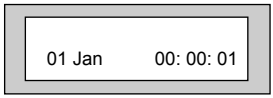




13) Press Yes. The display will show:-



14) Press 0 (zero) three times. The display will show:-



Linefault Sounders Description

The Linefault Sounder option determines how the system sounders (speakers) will react when a Linefault is detected. Below are the options available and a description of each option.

On if Set Linefault Sounders will operate when the system is Set and a Linefault is detected (may be silenced by User Code).

On if Unset Linefault Sounders will operate when the system is Unset and a Linefault is detected. (may be silenced by User Code)

FLT if Off A fault tone will be generated when the system is Unset and a Linefault is detected (may not be silenced by User Code).

Beep if Off A periodic beep will be generated when the system is Unset and a Linefault is detected (may not be silenced by User Code).

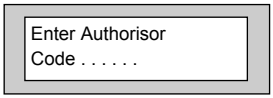
Always On Linefault Sounders are always On (Set or Unset) (may not be silenced by User Code).

Engineer Reset

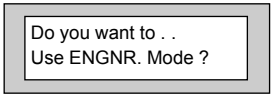
If the system is programmed as Engineer Reset the system will need to be Reset by the Engineer Code. Please follow the procedure below to effect the Reset.

1) If the system is still set, unset it via a valid User Code.

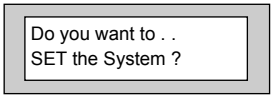
2) Enter the Engineer Code. The display will show:-



3) Enter a valid User Code. The display will show:-



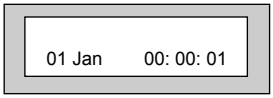
4) Press No. The display will show:-



5) Press Yes. The system will start to Set.

6) Enter the Engineer Code again.
This will Abort the Setting.

7) The System is now Reset.
The display will show for example:-

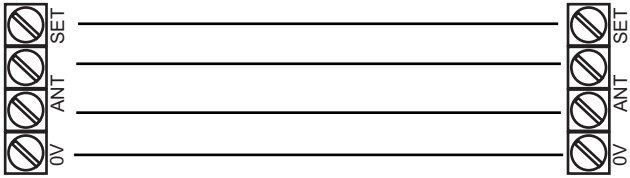


Details of User Code Reset and Anti-Code Reset are given in the User Manual.

Wiring Proximity 'E' and 'I' Readers

'I' Reader Terminals

RKP Terminals



Single 'E' Reader up to 7.5m

'E' Reader Wiring

RKP Terminals

Single 'E' Reader 7.5m to 15m

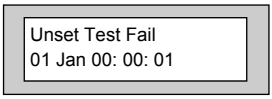
'E' Reader Wiring

RKP Terminals

Details on wiring multiple Readers are provided with the Reader.

Clearing 'Test Fail' Indication

If the display shows:-

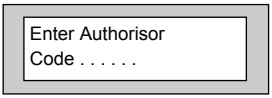


The system has a zone On Test that has failed when the system was Set.

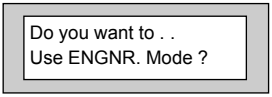
Please note: we recommend that the Test Attribute is only used on 12Hr type zones.

To clear the display proceed as follows.

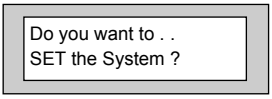
1) Enter the Engineer Code. The display will show:-



2) Enter a valid User Code. The display will show:-



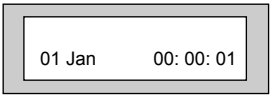
3) Press No. The display will show:-



4) Press Yes. The system will start to Set.

5) Allow the system to fully Set.

6) Enter the Engineer Code again to Unset the system. The display will show:-



5 SPECIFICATIONS

Power Input	230V a/c ±10% @ 50Hz
Humidity	70% non condensing
Max Loop Resistance	2K (not with E.O.L.)
Loop Delay Time	400mS
FUSES	
Mains Supply Fuse	20mm 125mA Anti-Surge
Aux Fuse	Resettable
Keypad Fuse	Resettable
Battery Fuse	Resettable
Low Voltage Output	13.65V dc Regulated +/-0.3V
Maximum Output Current	
GT490X	0.8A plus 0.123mA for battery charge.
Battery Sizes	12V 1.2A, 2A, 3A, 7A
Construction	Metal
Complies with	EN50131-1 PD6662
Conforms with	CE tested EMC Directive 89/336/EEC & LVD Directive 73/23/EEC
Number of Zones (Standard)	8 (2 Wire), 9 (EOL), 8+8 (EOL)
Expansion Type	1 Radio Expanders may be fitted
Number of Keypads	4 Normal
Zone Descriptors	16 Characters (last 3 omitted with tamper)
Max No of Users	15 + Engineer

Default Codes	Eng 1234, User 5678 (BS / EN2)
Code Length	4, 5 or 6 digits
User Names	9 Characters
Custom Screen	32 Characters
Non-Volatile Memory	Yes
Quiescent Currents	
Control Panel plus Keypad	135mA@12V d.c
Control Panel	90mA@12V d.c
Keypad	45mA@12V d.c
Control Panel plus 1 Keypad **ALARM**	160mA@12V d.c
Wirless Expander	50mA@12V d.c
Log Size	250 Event Log 31 Event Modem Log
Time & Date	Log & Display

Output Terminals and Connectors

RS485
Shares AUX 12V supply, (protection 1.1A resettable thermal fuse).

Speaker
Combined impedance of speakers connected **MUST NOT BE LESS THAN 16 ohms**. Speaker + terminal is AUX12V, speaker –ve is drive output.

PGM 1 and PGM2
Internal 1K pull-up to AUX12V, internal 22ohm series resistor to output. Maximum current sink **50mA**.
(Note that due to the 22ohm series resistor, with 50mA sink the output will be at appronimately 1.1V).

AUX12V
1.1A resettable thermal fuse, AUX12V also feeds RS485, Speaker, Bell and Strobe. This pair of terminals supply the + and - supply for the detectors.

Bell / Strobe
This pair of terminals are the output for the Bell / Strobe. The negative terminal is switched during an alarm period. Strobe –ve switch to 0V, max current for switch is **1A**. Shares AUX 12V supply (protection 1.1A resettable thermal fuse).

Keypad
0V + 12V Connections. Independently fused 12V supply, protection - 500mA resettable thermal fuse.

Power Supply

Output voltage 10.5 to 14.0V.
Ripple 0.6V max.

Low battery detection threshold - 11.0V +/-0.3V.
Low battery messages sent:
Fast Format will be PSU Fail / Globel Fault Channel
Contact ID - E302
SIA - YT.

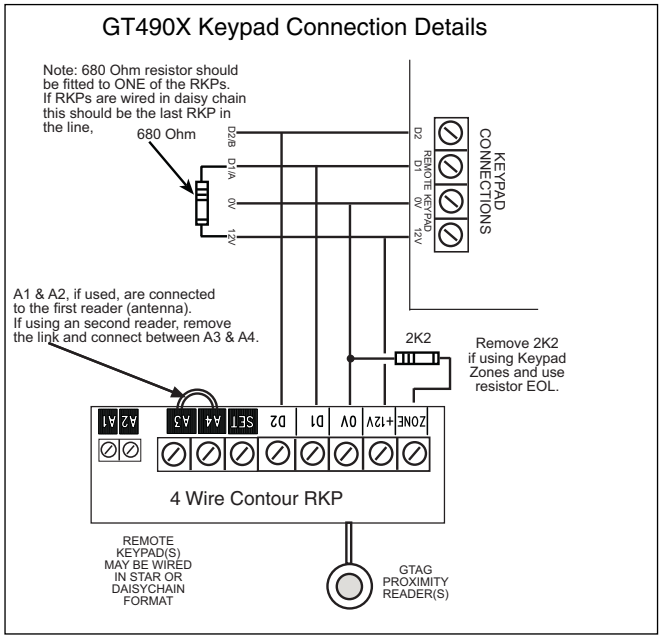
Will charge 8.5AH Battery to 80% within 72 Hrs.

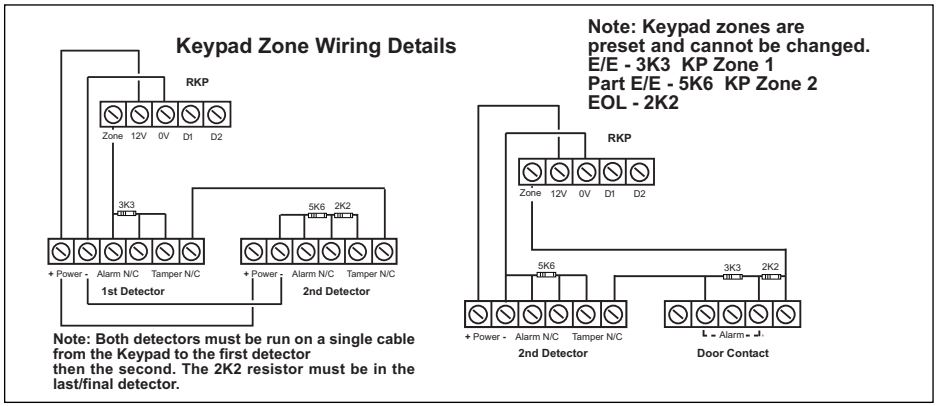
Sounders, detectors and other auxiliary items, including the control panel and keypad(s), should be included when calculating current drawn by the system.

Any damage caused through overloading the Control Panel Supply will not be covered by the warranty.

We recommend that additional power supplies are used to supply detectors on long cable runs.

6 4 Wire Contour RKP Wiring Information





Note: All keypads on the same system MUST be of the same type. i.e. All four wire or all six.

Note: All Keypads MUST be connected before powering up the Control Panel.

Testing the Battery Charge Voltage

IMPORTANT

To test the Battery Charge Voltage the battery must be connected to the battery leads first. (See figure 1).

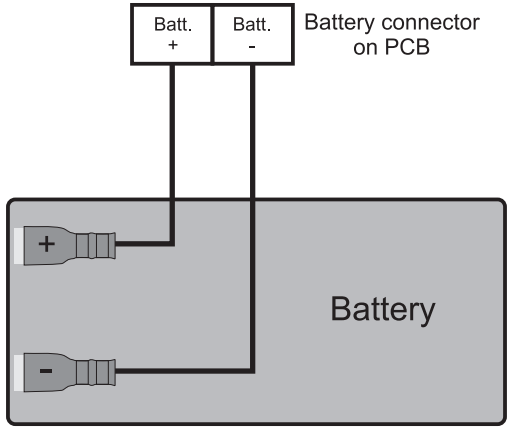


Fig 1.

Only if the battery is connected, and the battery terminal voltage is greater than 8.5V, will the charge circuit be switched on.

To test the charge voltage, connect a test meter as per figure 2.

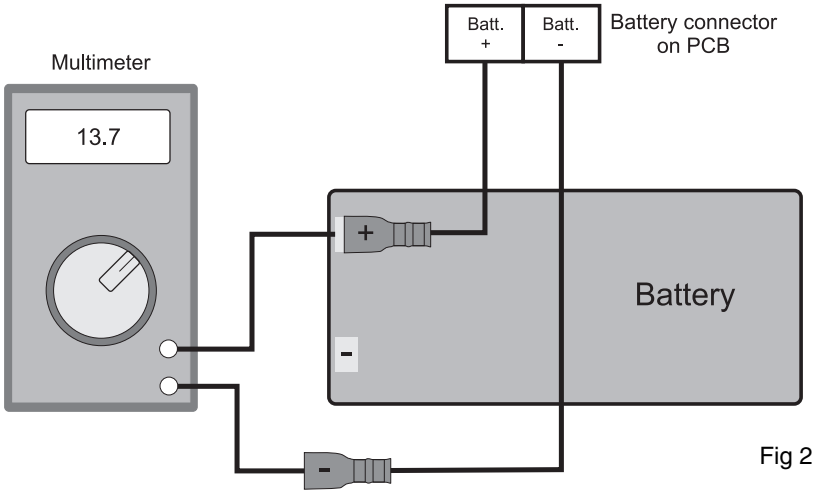


Fig 2.

Connect one meter lead to the battery by pushing the probe under the insulation of the battery spade.
Then remove the other battery lead and connect to the other meter lead. The meter will now show the battery charge voltage. Note that the voltage will drop off within 10 seconds. Repeat the above if required.

7 PD6662:2010 UPDATE - NEW FEATURES

EN50131-1 2006 and BS8243

PD 6662, the document describing how the European standards for Intrusion and Hold-up Alarm systems (I&HAS) should be applied in the UK, has been completely revised. The revision takes into account the publication of a number of new, revised or amended European standards. It also adds some new standards and documents published by British Standards that add or vary requirements for alarm confirmation, commissioning and maintenance and false alarm management.

PD 6662: 2010 will replace the 2004 version when it is published but for a two year period (ending May 31st 2012) systems may be installed under either the 2004 or 2010 version of PD 6662.

The most significant changes are listed below.

Engineer Access.
Can now be turned off if the customer has agreed, (in writing). When entering the engineer menu, the panel will generate an audible sound for approximately 8 seconds to indicate that the engineer is on site, (grades 1, 2, and 3). For grades 2/3 the ATS must also send an engineer on site signal.

Confirmed PA
Confirmed PA has been added to the Control Panel menu. (Programming Panic / Panic). Please note that Confirmed PA can only be produced by activating two zones programmed as panic or a keypad panic and a Panic zone.

If Mod + FF is used, the Alarm B channel will be transmitted for PA/Intruder confirmation.
If Mod + PID is used the confirmed PA will transmit E129.
If Mod + SIA is used the confirmed PA will transmit HV.
Note: This would normally be used on systems that have lost police response for Panic.

Keypad disabled for 90 seconds.
The keypad will monitor the number of attempts without a valid User Code being entered. More than seven attempts will cause a keypad tamper and lock-out the keypad for 90 seconds. This will be displayed as 'LOCK-OUT Check' and will require a valid User Code entry to stop the sounders (only after 90 seconds). If the system was Unset only the internal sounders will operate. If the system was Set a full alarm will be generated.

Setting by digital key
Setting the system must be initiated from within the premises; when using a radio fob interaction with the keypad will be required.
Setting the system with a Gtag fob must be from a keypad (not from a remote setting point) to comply with the standards for monitored alarms.

Zones on soak test.
Zones that are put on test must be indicated to the user. When setting the system the user must acknowledge this by pressing No.

Entry Procedure
As per BS8243 - 2010, Annex G.
A confirmed alarm may now be generated on entry by straying off from the entry route into a normal alarm zone.

Engineer on site channel.
BS-EN50131 - 3 2006 plus A1 2009, as per 8.3.1.
When an Engineer code is entered a signal is sent to the ARC indicating an engineer is on site.

New Fast format channels.
Engineer on site. (See page 50).
PA Confirm (See page 61).

New Contact ID and SIA triggers.
Engineer on site = Off/On. (See page 92).

New option for the reset modes.
Fault Reset = +Anti / Eng code / Anti code. (See page 66).

Notes

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