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Guard-Net

Installation and Programming Manual

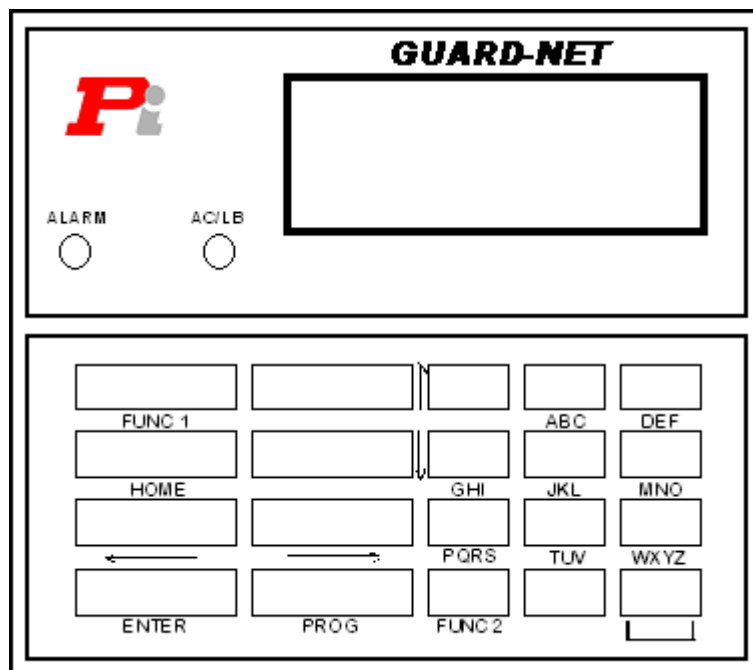


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Introduction:

The Guard-Net is a **South African designed and manufactured** product to allow for a localized on site, license free wireless monitoring system.

The Guard-Net allows for the monitoring of conditions to an on site control or guard room, nurses station, security office, etc and is ideally suited to any type of monitoring application in shopping malls, housing complexes, hospitals, schools, old age homes, frail care facilities, etc where a response to the condition is required.

Up to 15 unique site addresses allow for independent installations next to each other.

Conditions would typically consist of Panic, Fire, Medical and Burglary and will be displayed on the LCD keypad as the site name or description and the condition received.

Mr Jones Unit 5 Panic

When a condition is received, the monitoring personnel are alerted by the keypad emitting a high pitched buzz, an optional siren and a red led, and is subsequently logged in the 1000 event historic log and time date stamped.

Four (4) trigger outputs are available for connection to a communication device, such as the QD GPRS 4 Input Alarm Transmitter or the QD SMS Communicator.

The event is accepted by entering a unique pin code, which is assigned to a specific person and is then also logged and time date stamped. This allows for an on site audit trail as per site and condition, time taken to react and the responsible person to be identified.

Up to 32 operators can be programmed into the Guard-Net system.

The Guard-Net could be designed as either a stand alone of up to 250 remotes, or an unlimited pc based system, utilizing an intelligent repeater network of up to 255 repeaters, giving a coverage area of approximately 17 square kilometers.

The Guard-Net used the standard Codex 1,3 or 4 button range of remote transmitters as well as the 3 channel hard-wired transmitters in any combination.

Each button on the codex remote or each input on the hard-wired transmitter is programmable as either Panic, Fire, Medical or Burglary.

Repeaters can be selected for either normal or intelligent operation.

In the intelligent mode: When a repeated signal from another repeater is received and an acknowledgement from that repeater that the same signal has been received, and if that repeater has a shorter reporting path then this signal will not be re-repeated, thus reducing unnecessary signals on the network.

In the normal mode: All repeaters will re-repeat all received conditions.

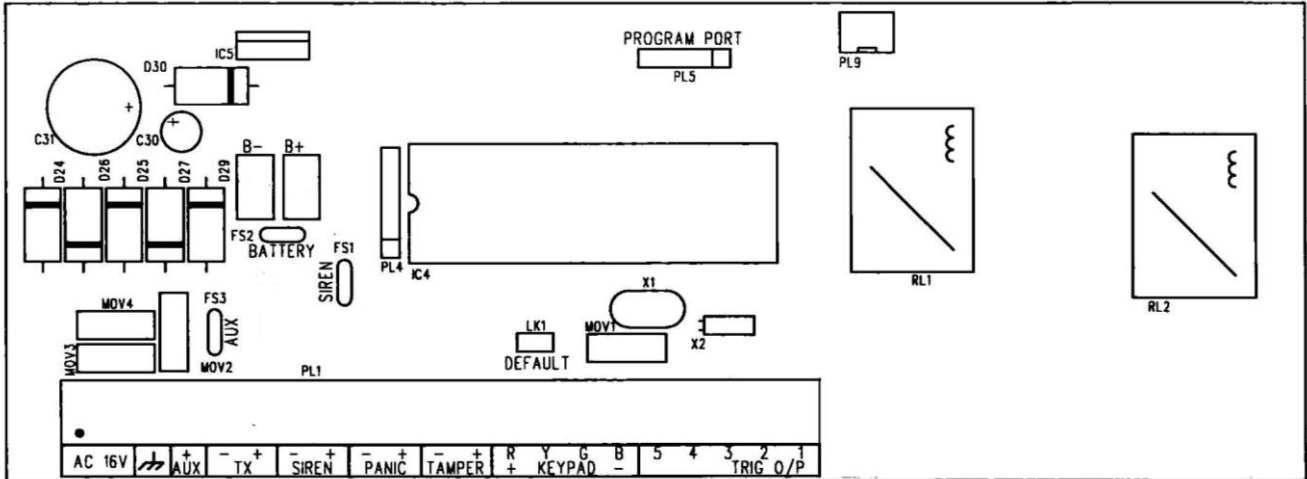
The Guard-Net system continuously monitors all the repeaters that have been set up on the network for supply voltage failure to the repeater as well as supervision conditions from all repeaters, ensuring early detection in the event of a failure.

Communication between the Guard-Net and repeaters is bi-directional, ensuring that all signals are received. The originating repeater via the network must receive an acknowledgement signal from the Guard-Net that the signal has been received. If this acknowledgement signal is not received, the repeater will re-transmit the same signal again for a total of xxx attempts over a period of xx seconds.

Installation Procedures:

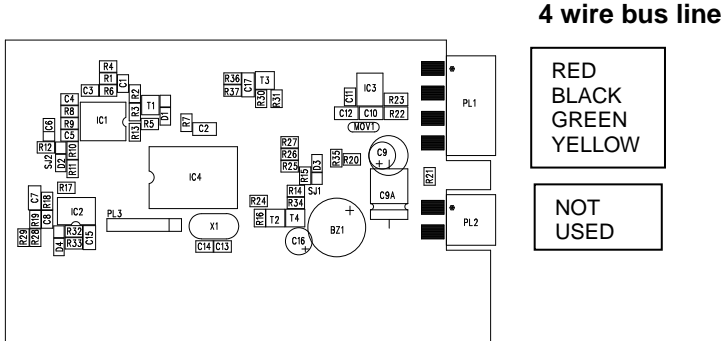
Please read all documentation carefully before installing the Guard-Net system

Main Board Connection Layout:



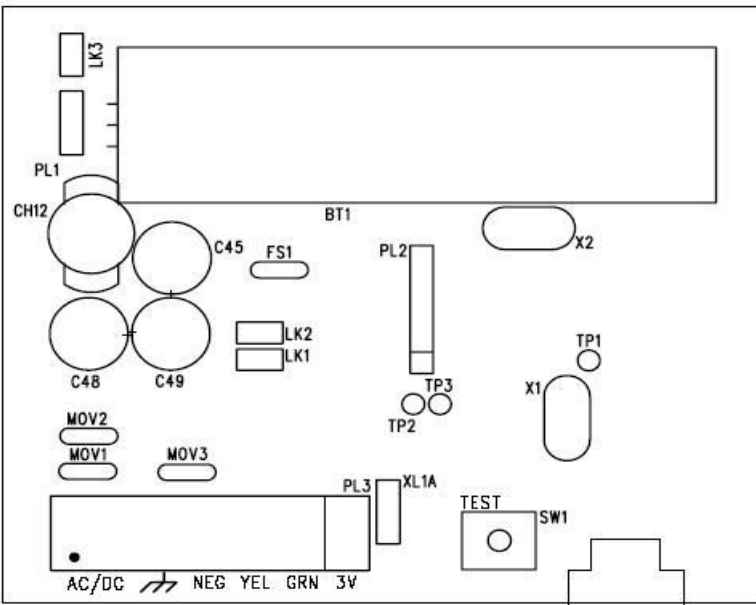
AC.....	Plug in transformer 16,5 volts 40 VA
EARTH.....	This must be connected to a suitable earth
AUX +.....	Positive 12 volts (max 1 amp)
TX -.....	Negative output to Alarm Radio Transmitter
TX +.....	Positive output to Alarm Radio Transmitter
SIREN -.....	Switched negative to the siren
SIREN +.....	Positive output to the siren
PANIC -.....	Panic input EOL resistor 2K7
PANIC +.....	Panic input EOL resistor 2K7
TAMPER -.....	Not used
TAMPER +.....	Not used
KEYPAD R.....	Positive connection to keypad R and receiver AC/DC input
KEYPAD Y.....	Data connection to keypad Y and receiver yellow
KEYPAD G.....	Data connection to keypad G and receiver green
KEYPAD B.....	Negative connection to keypad B and receiver AC/DC input
TRIG O/P 5.....	Permanent negative 12 volts
TRIG O/P 4.....	Burglary (2 second + pulse on burglary signal received)
TRIG O/P 3.....	Fire (2 second + pulse on fire signal received)
TRIG O/P 2.....	Medical (2 second + pulse on medical signal received)
TRIG O/P 1.....	Panic (2 second + pulse on panic signal received)

Keypad Connection Layout:



- RED..... Connect to Guard-Net Main board (Keypad R)
- BLACK..... Connect to Guard-Net Main board (Keypad B)
- GREEN..... Connect to Guard-Net Main board (Keypad G)
- YELLOW..... Connect to Guard-Net Main board (Keypad Y)
- +..... Not used
- Not used

Receiver/Repeater Connection Keypad Front:



- AC/DC..... Plug in transformer 16,5V 40VA or 12V DC from a power supply. Not polarity conscious
- EARTH..... Connect to a suitable earth
- NEG.....
- YEL..... Connect to the Guard-Net keypad Y (not used if set as a repeater)
- GRN..... Connect to the Guard-Net keypad G (not used if set as a repeater)
- 3V.....
- LK1..... In for receiver, out for repeater
- LK2..... In for intelligent mode, out for normal mode (only to be in when connecting the Guard-Net unit to a computer)

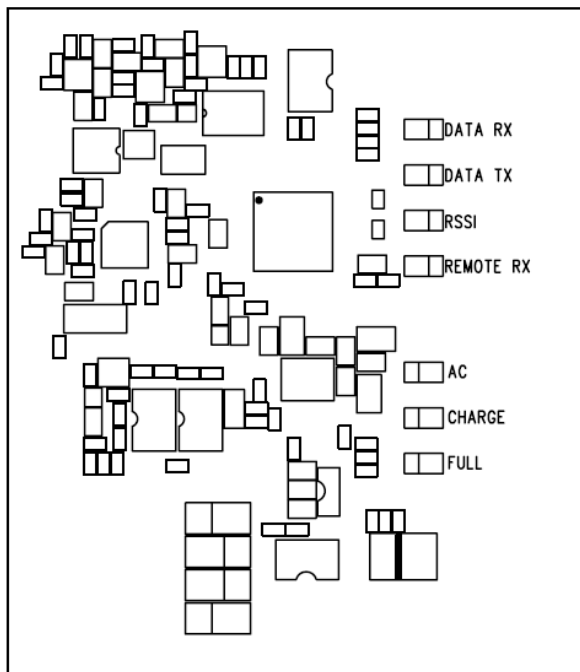
Receiver/Repeater Connection Keypad Back:

Back showing the led layout.

Note when in programming the following applies:

Pair leds = REMOTE RX and RSSI. DATA TX and DATA RX

Alternate pairs = DATA RX and RSSI. DATA TX and REMOTE RX



- FULL..... Indicates on-board battery fully charged
- CHARGE..... Indicates while on-board battery is being charged
- AC..... Indicates AC or DC supply voltage present
- REMOTE RX..... Indicates when a signal is being received
- RSSI..... Fast flash – good signal strength, slow flash – poor signal strength
- DATA TX..... Communication to Guard-Net motherboard
- DATA RX..... Valid repeater communication received

Note:

If all 3 leds, FULL, CHARGE and AC are on, this indicates that the on-board battery is disconnected or faulty. The on-board battery is a Li-ION 3,7volts, 2.0mah SB3016 type battery with an encapsulated charge circuit. Connection is made via a 3 pin plug to the pc board and will provide 3 days as backup in the event of supply failure.

Network Setup

The following steps are crucial in setting up and installing the network correctly.

All repeater settings are to be carried out on the Guard-Net unit prior to being installed.

Select a suitable site ID for the Guard-Net system. Valid ID's 1 to 15 (See system setup, selecting site address on page xx)

Each repeater needs to be set with the same site address programmed in the Guard-Net unit.

Each repeater needs to be assigned a unique ID number. This ID number will be assigned to the repeater by the Guard-Net unit.

Once the ID number has been assigned, the repeater must be marked accordingly and de-powered.

Repeater Setup

All repeaters to be de-powered before setting up.

Set the site address on the repeater:

1. Press and hold the test button while powering up the repeater
2. Release the test button.
3. The four leds (labeled REMOTE RX, RSSI, DATA TX, DATA RX) on the back of the pc board will flash.
4. The leds will stop flashing. The leds burning continuously indicates that the existing site addresses are in a binary format. REMOTE RX = binary 1, RSSI = binary 2, DATA TX = binary 4, DATA RX = binary 8.
5. Press the test button until desired site address is indicated. Each press will increment the number by 1
6. Remove the power from the repeater.

Repeat steps 1 to 6 for all the remaining repeaters.

NOTE: If in step 4 above the leds do not stop flashing, press the test button once, this will assign site address as 1, carry on with step 5.

Set the repeater ID number:

1. Apply power to a repeater. The leds will flash in pairs indicating that no ID has been set
2. Enter programming mode level 3

Keypad will display:

Network Manager Press # = Accept

Press the # key

Add repeater Press # = Accept

Press the # key

Press button on Repeater

Press the test button on the repeater.

3. Leds will flash on the repeater.

Repeater (number) Prog to save

Press the PROG key

Waiting for repeater
reply

Repeater Prog
Successfully

Note: In the event that the keypad backlight times out before “Repeater Prog Successful” appears, press the # key. This will repeat the request for the repeater to reply to the Guard-Net.

4. Leds on the repeater will now flash as alternate pairs indicating ID programmed
5. De-power the repeater
6. Mark the repeater with its ID number

Press ↑ to program another repeater
Complete from step 1 for all remaining repeaters.

7. Press HOME when completed to exit programming mode.

Mounting of repeaters:

When repeaters are being installed it is imperative that the closest repeater/s to the Guard-Net unit be mounted first, This is required for the repeaters to establish an intelligent path via the network to the Guard-Net unit.

Repeaters to be mounted as high as possible

1. Mount the repeater
2. Connect the 16V 40VA transformer
3. Connect the battery to the repeater
4. Leds will flash 1 at a time in sequence, until connection with the Guard-Net is established (this could take up to 2 minutes).
5. When a connection is established the leds will stop flashing.
6. Press the test button once

Guard-Net unit will display

Repeater (number) man
registered

7. Enter user code to accept
8. Enter user code again to clear
9. Repeat for all remaining repeaters

Note: In step 4 above, if the leds do not extinguish, no communication path has been established. Reposition repeater to an alternative site where communication will be established

Installer programming:

Enter installer programming mode

1. Press “Prog” key until a beep is heard
2. Enter installer code (default code 2580)

Keypad displays

Enter key 0 to 7
HOME = EXIT

- 0 = Edit operator user codes (up to 32 users)
- 1 = Program options (set operational parameters)
- 2 = Client manager
 - Add or delete remotes
 - View programmed remotes

3 = Network manager

- Program repeater ID
- View programmed repeaters

4 = View event log. (Reads from the most recent to the oldest) 1000 events

5 = Erase all remotes

6 = Set time

7 = Erase all repeaters.

Add, change or delete codes:

The installer only can change supervisor (level 1) codes

Installer code = index 00 and must be set as a level 0

A supervisor can only add, change or delete user codes.

Level 1 (supervisor) - Manage user codes, accept alarm conditions, view system settings and historic log.

Level 2 (operator) - Accept alarm conditions only.

Enter installer programming mode.

Keypad displays

Enter key 0 to 7
HOME = EXIT

Enter key 0

Edit User codes
Press # = Accept

Press the # key

User index 00
User code ???L?

To change installer code enter 00

User index 01
User code 2580L0

Enter the desired new 4 digit code and level 0 (the new digits will be displayed as they are entered)

User index 01
Prog to save

Press and hold the PROG key until a long beep is heard.

User index 01
User code ???L?

Enter next user index number and repeat the above procedure for all required users

Press the HOME key to exit

Delete a user code:

Enter user programming mode

Enter key 0 to 7
HOME = EXIT

Enter key 0

Edit User codes
Press # = Accept

Press the # key

User index 00
User code ???L?

Enter user index number

User index ??
User code xxxL?

Press the FUNC 1 key

User index ??
User code ???L?

Press the PROG key to save

Press the HOME key to exit

System Setup

Has the following programming options, Pc Control, Siren, External Panic, Account, Serial Tx, Auto Test Time, Ac Fail Time and Site Address.

Enter installer programming mode

Press key 1

Programming options
Press # = Accept

Press the # key

Pc control
Off

Press the ↑ key to toggle

Pc control
On

Press the PROG key to save

Pc control
Saved

Press the → key

Siren
Off

Press the ↑ key to toggle

Siren
On

Press the PROG key to save

Siren
Saved

Press the → key

External Panic
Off

Press the ↑ key to toggle

External Panic
On

Press the PROG key to save

External Panic
Saved

Press the → key

Account
= 1234

Enter new account code

Press the PROG key to save

Account
Saved

Press the → key

Serial Tx
Off

Press the ↑ key to toggle

Serial Tx
On

Press the PROG key to save

Serial Tx
Saved

Press the → key

Auto Test Time
Disabled

Enter time in Hours – 00 to 99 (00 = disable)

Auto test
= 01 Hours

Press the PROG key to save

Auto test
Saved

Press the → key

Ac Fail Time
Disabled

Enter time in minutes – 001 to 999 (000 = disable)

Ac Fail Time
= 0001 Minutes

Press the PROG key to save

Ac Fail Time
Saved

Press the → key

Site Address
= 01 Site ADDR

Enter the desired site address

Site Address
= XX Site ADDR

Press the PROG key to save

Site Address
Saved

Press the HOME key to exit

Add new remotes:

Enter installer programming mode

Press key 2

Client Manager
Press # = Accept

Press the # key

Remotes
Press # = Accept

Press the # key

Press button on
Remote to manage

Press a button on the codex remote transmitter to be added

New remote
FFFFFFFF

Press the ↑ key

Prog to save
FFFF

The cursor will begin flashing under the first F (only 4 are now displayed)
Enter the name for the remote transmitter (16 digits maximum)

The characters are the same as found on most cell phones

1 = ., ;, ?, !, ", ' ; **2** = A, B, C, 2 ; **3** = D, E, F, 3 ; **4** = G, H, I, 4 ; **5** = J, K, L, 5 ; **6** = M, N, O, 6 ;
7 = P, Q, R, S, 7 ; **8** = T, U, V, 8 ; **9** = W, X, Y, Z, 9 ; **0** = 0 ; * = * ; # = #, SPACE.

→ Moves cursor one character to the right

← Moves cursor one character to the left

Press the PROG key

Choose key func
Panic

Press the ↑ key to change between the key functions (Panic, Medical, Fire and Burglary)

Press the PROG key

Press button on
Remote to verify

Press the **same** button on the remote

Remote saved
Location ???

Press ← to return to the remote menu to add additional buttons or press HOME to exit.

Adding additional buttons:

Additional buttons can be added at any time
Enter user programming mode

Press key 2

Client Manager
Press # = Accept

Press the # key

Remotes
Press # = Accept

Press the # key

Press button on
Remote to manage

Press the button on the codex remote transmitter to be added

Current remote
(Remote name displayed)

Press the ↑ key

Prog to save
(Remote name displayed)

Press the PROG key

Current key func
Empty

Press ↑ until desired function

Press the PROG key

Press Prog to
Program Changes

Press the PROG key

Remote saved
Location ???

Press the PROG or # key to return to the remote menu or HOME to exit.

Deleting a remote:

A remote can be deleted by having the remote present or by location, in the event that the remote has been lost.

Delete a remote that is available:

Enter user programming mode

Press key 2

Client Manager
Press # = Accept

Press the # key

Remotes
Press # = Accept

Press the # key

Press button on
Remote to manage

Press any button on the codex remote transmitter to be deleted

Current remote
FFFFFFFFFFFFFFF

Press the FUNC1 key

Press ENTER to
Confirm DELETE

Press the ENTER key

Remote DELETED
Successfully

Press the PROG or # key to return to remote menu or HOME to exit

Deleting a remote that is not available:

Enter user programming mode

Press key 2

Client Manager
Press # = Accept

Press the # key

Remotes
Press # = Accept

Press the → key

List all clients
Press # = Accept

Press the # key

Client POS #000
(Remote name displayed)

If the location number is known, enter the location number as a triple digit number.

If the location number is not know, press the ↑ to scroll forwards or the ↓ to scroll backwards until the desired location and the remote name is reached.

Press the FUNC1 key

Press ENTER to
Confirm DELETE

Press the ENTER key

Remote DELETED
Successfully

Press the PROG to return to remote menu or HOME to exit

Setting new repeater/s ID:

Refer to section xx installing repeaters

Enter user programming mode

Press key 3

Network Manager
Press # = Accept

Press the # key

Add repeater
Press # = Accept

Press the # key

Press button on
Repeater

Press the test button on the repeater to be added

Repeater (number)
Prog to save

Press the PROG key

Waiting for repeater
reply

Repeater Prog
Successfully

View historic log:

Enter user programming mode

Press key 4

View event log
Press # = Accept

Press the # key

000
(most recent event displayed)

Press ↑ to move to the next event

Press ↓ to move back an event

000
(previous event displayed)

Press the → to view the time of the event

Press the HOME key to exit

Erase all remotes:

Enter user programming mode

Press key 5

Erase all rem
Pres # = Accept

Press the # key

Erase all rem
Enter to confirm

Press the ENTER key

Waiting for
Panel response

Remotes Erased
Successfully

Press the HOME key to exit

Setting the time:

Enter user programming mode

Press key 6

Time and date
Press # = Accept

Press the # key

Set the Time
Time hh:mm

Enter current time

Press Prog to
Program Changes

Pressing the PROG key returns to the ready mode

Guard-Net
Ready Time display

Erase all Repeaters:

Enter user programming mode

Press key 7

Erase all rep
Press # = Accept

Press the # key

Erase all rep
Enter to confirm

Press the ENTER key

Waiting for
Panel response

Repeaters Erased
Successfully

Press the HOME key to exit