

KEYPAD OPERATION SUMMARY

Operation by KEYPAD	
<p>to ARM</p> <p>The panel must initially be disarmed.</p>	<p>Press ARM + E</p> <p>(If the Arming Shortcut is enabled)</p> <p>or press ARM + [USER CODE] + E</p> <p>or press [USER CODE] + E</p> <p>(If Code Only Arming has been enabled for that user code)</p>
<p>to DISARM</p> <p>To disarm and/or reset alarms.</p>	<p>Press [USER CODE] + E</p>
<p>to arm HOME MODE</p> <p>The panel must initially be disarmed.</p> <p>See page 12 for more information on arming Home Mode.</p>	<p>Press HOME + E</p> <p>(If the HOME MODE SHORTCUT is enabled)</p> <p>or press HOME + [User Code] + E</p>
<p>PANIC alarm</p>	<p>Press both * # Panic keys together</p>
<p>KEYPAD DURESS</p> <p>Keypad Duress allows the user to send a silent duress report while disarming, (if the system is being monitored by a central station).</p>	<p>Press [5, 6, 8 OR 9] + [USER CODE] + E</p> <p>Add one these digits in front of a user code when disarming.</p> <p>This sequence will disarm the panel and send a Duress report by dialler to the central station.</p> <p>(REPORT KEYPAD DURESS must be enabled)</p>
<p>EXCLUDE ZONES</p> <p>EXCLUDE + E can only be used when the panel is disarmed.</p> <p>EXCLUDE + CODE + E can be used any time.</p>	<p>Press EXCLUDE + E (If the EXCLUDE SHORTCUT is enabled)</p> <p>then [ZONE No.] + E [ZONE No.] + E</p> <p>(Enter the zone number/s to be excluded.)</p> <p>then press E to exit Exclude mode</p> <p>The Exclude light flashes constantly while zones are excluded. Excluded zones are automatically Included next time the panel is disarmed.</p>

* If a user code is assigned to a radio key and has Extra Option 4E enabled, (CODE ONLY ARMING), then pressing OFF toggles the panel arm/disarm state.



Ness D8x / D16x ALARM CONTROL PANEL

USER'S MANUAL



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D8X/D16X USER'S MANUAL

Document Part No: 890-006
For the product D8x/D16x Control Panel



WARNINGS & NOTICES

Ness Corporation manufacturing processes are accredited to ISO9001 quality standards and all possible care and diligence has been applied during manufacture to ensure the reliable operation of this product. However there are various external factors that may impede or restrict the operation of this product in accordance with the product's specification.

These factors include, but are not limited to:

1. Erratic or reduced radio range (if radio accessories are installed). Ness radio products are sophisticated low power devices, however the presence of in-band radio signals, high power transmissions or interference caused by electrical appliances such as Mains Inverters, Wireless Routers, Cordless Phones, Computers, TVs and other electronic devices may reduce radio range performance. While such occurrences are unusual, they are possible. In this case it may be necessary to either increase the physical separation between the Ness receiver and other devices or if possible change the radio frequency or channel of the other devices.
2. Unauthorised tampering, physical damage, electrical interruptions such as mains failure, electrical spikes or lightning.
3. Solar power inverters are a known source of electrical interference. Please ensure that this product and all associated cabling is installed at least 3 metres away from a solar power inverter and its cabling.

WARNING: Installation and maintenance to be performed only by qualified service personnel.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries in accordance with local regulations.

ADSL NOTICE: ADSL broadband data can interfere with the operation of your alarm dialler. It is recommended that a quality ADSL filter be installed as per the filter manufacturer's guidelines in premises with an alarm dialler installed.

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Ness reserves the right to make changes to features and specifications at any time without prior notification in the interest of ongoing product development and improvement.

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INSTALLATION RECORD



NESS D8 ALARM CONTROL PANEL
 NESS D16 ALARM CONTROL PANEL

TIMERS

User programming options

P26E ENTRY DELAY TIME 1 Seconds
P27E ENTRY DELAY TIME 2 Seconds
P28E EXIT DELAY TIME Seconds
P29E SIREN RESET TIME Minutes

ZONE ASSIGNMENT

Installer programming options

P41E ENTRY DELAY 1
P43E ENTRY DELAY 2
P42E HANDOVER
P40E INSTANT
P45E AREA 1
P46E AREA 2
P51E MONITOR
P52E 24 HOUR
P54E RESET OUTPUT
P55E STROBE OUTPUT
P56E SONALERT OUTPUT
P57E SIREN OUTPUT
P74E Report (dialler)

ZONES	DEVICE TYPE	PIR, Reed switch, etc	DESCRIPTION	Entrance, bedroom1, etc	P41E ENTRY DELAY 1	P43E ENTRY DELAY 2	P42E HANDOVER	P40E INSTANT	P45E AREA 1	P46E AREA 2	P51E MONITOR	P52E 24 HOUR	P54E RESET OUTPUT	P55E STROBE OUTPUT	P56E SONALERT OUTPUT	P57E SIREN OUTPUT	P74E Report (dialler)
D8 & D16	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
D16	9																
	10																
	11																
	12																
	13																
	14																
	15																
	16																

USER CODE	OPTION No	Extra Options Assigned E.g. Radio Code, Arm Only, etc.
1 Master Code	P201E	
2	P202E	
3	P203E	
4	P204E	
5	P205E	
6	P206E	
7	P207E	
8	P208E	
9	P209E	
10	P210E	
11	P211E	
12	P212E	
13	P213E	
14	P214E	
15	P215E	
16	P216E	
17	P217E	
18	P218E	
19	P219E	

USER CODE	OPTION No	Extra Options Assigned E.g. Radio Code, Arm Only, etc.
20	P220E	
21	P221E	
22	P222E	
23	P223E	
24	P224E	
25	P225E	
26	P226E	
27	P227E	
28	P228E	
29	P229E	
30	P230E	
31	P231E	
32	P232E	
33	P233E	
34	P234E	
35	P235E	
36	P236E	
37	P237E	
38	P238E	

USER CODE	OPTION No	Extra Options Assigned E.g. Radio Code, Arm Only, etc.
39	P239E	
40	P240E	
41	P241E	
42	P242E	
43	P243E	
44	P244E	
45	P245E	
46	P246E	
47	P247E	
48	P248E	
49	P249E	
50	P250E	
51	P251E	
52	P252E	
53	P253E	
54	P254E	
55	P255E	
56	P256E	

SYMPTOM	POSSIBLE CAUSE	REMEDY
When arming, a zone light is on or the keypad gives a long beep.	One or more detection device (a PIR or reed switch) may be <i>unsealed</i> .	Find the cause of movement or close the door or window.
<ul style="list-style-type: none"> • 10 beeps from keypad. • MAINS light is flashing. • BATTERY light is flashing. 	The mains power may be off, ...or the panel's backup battery may be low, ...or a Radio Device battery may be low.	Make sure the plug pack is plugged in and the power point is turned on. The backup battery may need replacing, call your installer.
1 long beep from the keypad.	Invalid keypad entry.	Press the E button and try again.
2 second siren at the end of Exit Delay time.	A zone was <i>unsealed</i> at the end of exit delay time.	Disarm the panel and check all zones.
The strobe light is flashing.	There has been an alarm within the last 72 hours.	Reset the alarm by disarming the panel and check the Alarm Memory
Siren sounds while the panel is disarmed.	A 24 hour zone has been alarmed. (Siren Tamper, Box Tamper, Panic Button).	Reset the alarm by disarming the panel and call your installer.
EXCLUDE light is flashing.	A zone/s has been Excluded.	This is to indicate that one or more zones have been Excluded.
Cannot arm and the EXCLUDE light is on steady.	You are in Exclude mode.	Press E to exit Exclude mode.
TAMPER light flashing	The 24 hour Tamper input has alarmed. (Siren tamper or box tamper).	Call your installer.
ALARM MEMORY light is flashing.	There are alarms in memory.	To clear the ALARM MEMORY light, view the Alarm memory otherwise the light will clear next time you arm the panel.
Cannot enter Program Mode.	The panel is armed. Or you may be attempting to enter program mode using one of the user codes.	Disarm the panel before attempting to enter Program Mode. Try again using the Master Code.
When I arm by radio key, the Armed light on the keypad does not turn on immediately.	The panel is waiting 5 seconds for a second press of the ON button to enter Monitor mode.	This is normal operation when arming of Monitor mode by radio key is enabled.
The keypad is making a continuous slow beep.	This is the AutoTime warning beep which can be programmed to start from 1 to 99 minutes before an AutoTime event is due to begin.	The beeps will continue during the AutoTime warning period changing to faster beep in the final minute prior to the AutoTime event.
The panel re-arms itself a short time after disarming.	Auto Re-Arm is enabled.	Enter the premises after disarming. Auto Re-Arm is designed to re-arm the panel if you don't enter the premises after disarming.

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- 8 or 16 alarm zones (D8x / D16x).
- Supports up to 3 remote keypads.
- 56 user codes can be programmed to operate by keypad PIN, radio key or access card.
- Optional Ness Radio Interface for fully integrated wireless security.
- Programmable 2 Area partitioning can split the panel into two independent areas plus a common area.
- Real Time Clock with AutoTime features Automatically arm/disarm and control auxiliary outputs on a daily or weekly basis.
- 3 Door Access Controller onboard with support for Weigand prox or fingerprint readers.
- Home Mode allows partial arming, (eg, perimeter security overnight).
- Day Mode feature allows daytime monitoring of fire doors, coolrooms etc.
- Temporary Day Zone feature allows easy enabling/disabling of Day Mode.
- Keypad Panic feature.
- Keypad Duress feature.
- Two button arming feature.
- Fire Alarm feature with different siren tones.
- Highly flexible zone to output mapping.
- Multiple programmable EOL resistor values from 0k to 22k. An installer's favourite.
- Onboard Vibration Sensor Analyser with programmable sensitivity. Use with Nessensor™ vibration sensors.
- Siren chirp and strobe flash on arming with radio key.
- Quiet chirps option on arm/disarm by radio key.
- True Dynamic Battery Test actively tests the battery under load every hour.
- 4 programmable auxiliary outputs can be operated automatically by AutoTime or manually by keypad.
- Enhanced serial data input/output via RS232. Interface with third party products.
- Automatic reset fuses / no glass fuses to replace.
- Programmable siren/reset lockout complies with noise regulations.
- 30 event memory can be reviewed by keypad.
- Easy programming by keypad or NessComms™ software.
- All programming data is permanently stored in a non-volatile memory.
- All inputs and outputs are heavily protected against lightning and high voltage supply transients.
- Optional output expander for even more auxiliary outputs.

DIALLER

- Full remote upload/download by PC and modem using NessComms™ software.
- Remote control of outputs by telephone.
- Arm/disarm remotely by telephone
- Contact ID Format for central station monitoring. Supports two 14 digit phone numbers plus one "follow me" number for audible monitoring.
- Audible Voice reporting feature.
- Phone line integrity monitoring can activate an output if the phone line is disconnected.
- Dialler 'Listen in' option for installers.
- Auto Test calls daily, weekly or any interval.
- Pulse or DTMF dialling.
- True dial tone detection.

OPTIONAL RADIO ACCESSORIES

Ask your installer about the range of Ness radio devices for the optional extra convenience of wireless remote control and wireless detection.

Operating your Ness security system can be as convenient as opening your car door. Ness Radio Keys™ provide the benefits of separate ON, OFF and PANIC buttons as well as optional control of auxiliary outputs - all in a slim, waterproof remote control.

* Ness radio products require a Ness Radio Interface (100-200) to be fitted to the control panel.



RADIO KEYS

Fully waterproof, ultra slim 3 or 4 button Radio Keys for remote control of the control panel.

With separate buttons for ON (Arm), OFF (Disarm), PANIC and AUX functions (RK4 only). Including long life lithium battery.



RK1 Radio Key Pendant

RADIO KEY PENDANT

Fully waterproof pendant style transmitter can be used as a portable wireless Panic button.

Supplied with a neckchain as well as wristwatch straps. Ideal for use as a medical alarm for the elderly or infirm. (Central Station Monitoring is especially recommended when used for medical alarm purposes). Includes long life lithium battery.



RADIO REED SWITCH

Ness Radio Reed Switch for wireless door and window protection. Includes long life lithium battery.

Top: RR2 Mini Radio Reed Switch
Bottom: RR3 Micro Radio Reed Switch



NESS RADIO KEYPAD

A unique fully portable radio keypad. The Ness Radio Keypad provides totally wireless Arming/Disarming of the control panel.

Also operates Home Mode and provides a Panic alarm.

The Ness Radio Keypad is suitable for use as a portable keypad or for adding an extra keypad in areas where it is not possible to install wires.



R15 Radio PIR



R12 Radio PIR



RADIO MOTION DETECTORS

Ness R15 Radio PIR and Ness R12 Radio PIR for wireless motion detection.

Can be used in combination with Ness hardwired detectors in areas where it is not possible to install wires. Includes long life lithium battery.

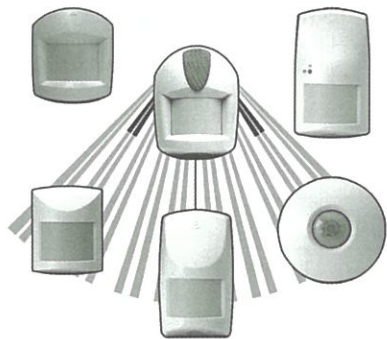
The Ness R15PET Pet Aware model detects humans but is immune to household pets. Allows you to protect your home with your pets inside.



RADIO SMOKE DETECTOR

The Ness Radio Smoke Detector provides a fully wireless smoke detection option which can trigger the panel's siren/s and dialler if required (or as programmed by your installer.)

The Ness Radio Smoke Detector uses Photo-electric smoke detection technology. On board sounder and test button for the sounder and radio transmitter. A single battery powers the smoke detector and the transmitter. Includes 9V lithium battery.



QUANTUM™

NESS QUANTUM DETECTORS

The Ness Quantum™ range of high-tech motion detectors includes passive infrared detectors, dual technology microwave and infrared, as well as ceiling mounted 360° detectors.

All Ness detectors are designed and manufactured using the most modern technology and techniques to ensure superior reliability and performance.

The Ness Quantum™ Pet Aware PIR and Pet Aware Dual have a superior ability to discriminate between household pets and unwanted human intruders.

Ness Pet Aware detectors make it possible to protect your premises with your pets indoors. (Up to 25kg animal).



NESS
CCTV Products

Consistent™
Commitment
To
Value

NESS CCTV PRODUCTS

The wide range of Ness CCTV equipment allows your installer to design a professional state-of-the-art system for your home, office, shop or factory.

Ness cameras include dome cameras, Infra-red illuminated cameras, miniature hidden cameras and professional digital cameras.

Video monitors are available in CRT or flat screen LCD styles in sizes to suit all applications.

Ness' acclaimed Digital Video Recorders store video footage on hard disk drives for fast and easy to retrieve 'tapeless' recording.

Ness DVRs are available in 4, 6, 9 and 16 channel models to suit all applications and all budgets, even mobile models for use in vehicles such as buses and trucks.

Most DVR models are 'Internet Ready' for instant connection to a LAN and broadband internet connection for remote viewing.

Ness CCTV means Consistent Commitment To Value.

The Ness D8x and D16x microcomputer based 8 or 16 zone **control panel** is the heart of your security system to which all your detection devices connect.

Each **Zone** of the panel can be connected to one or more detection devices to protect separate rooms of your premises.

Detection devices may be wired to the panel or you can use optional wireless detectors.

Passive Infra-Red motion detectors (**PIRs**) are used to detect motion of people or animals. **Pet Aware** motion detectors can ignore pets and still detect people. **Reed Switches** are fitted to windows and doors to detect opening. **Vibration sensors** such as the **Nessensor™** can be used to detect glass breakage or forcing of windows or doors.

Normally a zone is considered **Sealed**. Activation of a detection device will cause the zone to be **Unsealed** and may cause an alarm.

Detectors such as fire detectors and panic buttons must be able to generate an alarm at all times regardless of the panel setting. A zone with this assignment is called a **24 hour zone**.

Some detection devices may be required to generate an alarm or warning only when the panel is Disarmed. A zone with this assignment is called a **Day zone**.

Before leaving the premises you must "**Arm**" (turn on) the panel. After arming, the panel will ignore detectors during the **Exit Delay Time** to allow you to exit without triggering an alarm.

The system can be armed and disarmed using the keypad supplied or by optional Radio Keys or Access Cards or Fobs.

When you enter the premises the panel will ignore selected zones for the **Entry Delay Time** and will not alarm unless you disarm the panel during this allowed time.

When an alarm occurs, it can be reset with a **User Code**¹ or by optional Radio Key or Access Card/Fob², otherwise it will reset at the end of Alarm Reset Time. Resetting an alarm stops the sirens and strobe light. If an alarm is not reset the sirens will stop after the programmed time (default is 5 minutes) and the strobe light will stop after 72 hours.

Home Mode (also called Monitor mode) allows you to Arm selected zones while others are ignored. Typically, perimeter zones (doors and windows) can be monitored while you are at home.

If you wish to split your alarm system into two areas with access limited to each area by code numbers then **Area operation** is used. Radio Keys can also Arm and Disarm Areas.

The control panel housing and the covers over external sirens are protected by **tamper switches** to detect someone attempting to disable the security system. Activation of these switches will cause an instant tamper alarm.

If there is a problem with a detector, you can **Exclude** the associated zone so that it is totally ignored and cannot generate an alarm. Including the zone will enable it to generate an alarm again.

The control panel is fitted with a **rechargeable backup battery** to ensure your security system continues to operate if the mains power is interrupted. This control panel automatically tests the battery every hour and whenever you Arm/Disarm the panel. (**Dynamic Battery Test**).

All alarms are stored in memory and can be viewed at any time in **Memory Mode**.

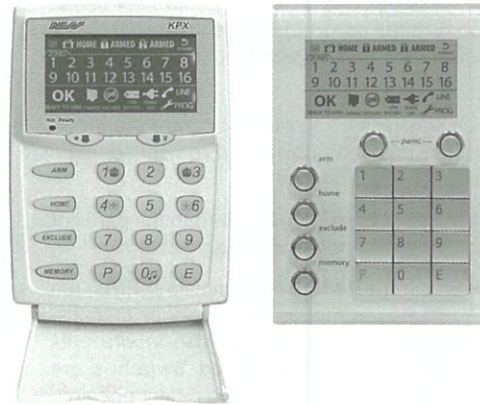
¹ Keypad codes programmed as **ARM ONLY** will not reset the panel.

² Access Cards/Fobs can reset the panel if the **DISARM BY ACCESS CARD** option has been enabled by your installer.

The instructions in this manual relate to Ness KPX and Saturn keypads.

The KPX keypad is used in examples throughout this manual. Saturn keypad operation is identical.

Refer to the Ness Navigator user's manual for operating instructions specific to the Navigator Touch Screen keypad.



KEYPAD BEEPS

BEEPS	MEANING
1 BEEP	Any key press.
3 BEEPS	Valid Command.
1 LONG BEEP	Error.
10 BEEPS	Mains Power is off or Panel Battery is low or A Radio Device has sent a low battery signal or Telephone Line Fail has been detected.
Constant SLOW beeps	An AutoTime action is due to begin.
Constant FAST beeps	An AutoTime action will begin in <i>one minute</i> .

DISPLAY TEST

To display all the keypad icons press and hold the (E) button for at least 2 seconds. All the icons will be on while the (E) button is held down.

Display Test can be activated at any time either in operating mode or any program mode.

AUDIBLE FEEDBACK

3 beeps	<ul style="list-style-type: none"> The User Code is valid Successful Arming or Disarming An Auxiliary output has been turned ON.
1 long beep	<ul style="list-style-type: none"> Panel is already Armed Invalid code. Try again. Remote AUX operation is not enabled
1 short beep	<ul style="list-style-type: none"> An Auxiliary output has been turned OFF.

SUMMARY OF TELEPHONE COMMANDS

0	Prepare to receive commands
1 #	Arm Areas
2 #	Disarm Areas
1 1 *	Turn ON or Pulse AUX1
1 1 #	Turn OFF AUX1
2 2 *	Turn ON or Pulse AUX2
2 2 #	Turn OFF AUX2
3 3 *	Turn ON or Pulse AUX3
3 3 #	Turn OFF AUX3
4 4 *	Turn ON or Pulse AUX4
4 4 #	Turn OFF AUX4
* #	Finished – hang up

EXAMPLE: ARMING THE PANEL BY TELEPHONE

- Dial the panel telephone number. Listen for one double ring then hang up.
- Wait 10 seconds, then dial the telephone number again.
The panel will answer immediately and gives a 2 second beep followed by low tone.
- PRESS 0 To prepare the panel (3 beeps)
- PRESS [User Code] # to authorise the next command (3 beeps)
- PRESS 1 # to arm the panel (3 beeps)
- PRESS * # to finish and hang up

The D8x/D16x will allow a user to call in to the panel, using a standard DTMF telephone, and remotely Arm or Disarm all areas and also turn on or off Aux outputs 1, 2, 3 or 4.

To maintain panel security, remote operations can only be activated after entering a valid user code.

To operate the panel by telephone, you need a DTMF capable telephone, a valid user code and you must know the telephone number of the line to which the panel is connected.

NOTES

- If the panel does not receive commands for periods longer than 10 seconds it will assume that the call is finished and it will hang up.
- If an alarm occurs which requires the panel to dial out while attempting remote control, the panel will treat the alarm as a priority, give a constant tone as a warning and then hang up.
- When all remote control commands are finished press *** #** to force the panel to hang up.

SEQUENCE OF OPERATION.

1. Phone the panel telephone number and listen for the required number of rings and then hang up.
2. Wait 10 seconds and then call the number again within 50 seconds.
3. The panel will answer the second call immediately, sound a beep for 2 seconds then, after a pause, it will sound a lower frequency tone. The panel is now ready to receive telephone commands.
4. Press the **0** button on the telephone. This tells the panel that telephone commands will follow. The panel will respond with either 3 beeps if all OK (One long beep means try again).
5. Now enter a valid User Code (that is normally used for Arming or Disarming the panel) followed by the **#** button.

The panel will respond with 3 beeps if it recognises the code or 1 long beep to signal the code was invalid and to try again.
6. Enter the required command. See the summary of telephone commands on the next page.
7. Press *** #** to finish. This tells the panel to hang up. Also hang up your telephone.

KEYPAD DISPLAY INDICATORS IN OPERATING MODE

KEYPAD ICON DISPLAY	OFF	ON	FLASHING
ZONES 1-8 (or 1-16)	Zone is sealed.	Zone is unsealed.	Zone is in alarm.
OK READY TO ARM	Zone/s are unsealed. or Power fault. or Panel is armed. or phone line fault.	Ready to Arm	
ARMED	Panel is disarmed, or Area 1 is disarmed, if using Areas.	Panel is armed, or Area 1 is armed, if using Areas.	
ARMED	Area 2 is disarmed.	Area 2 is armed if using Areas.	
HOME	Home Mode is disarmed.	Panel is armed in Home Mode.	Day Mode enabled, (see page 20).
MEMORY	Normal.	Memory mode selected.	New alarm/s in memory.
RADIO	Normal.	Receiving a radio signal. (If radio fitted.)	A Radio Key or other radio device has low battery.
TAMPER	Normal.		Internal Tamper: Double Flash with long pause. External Tamper: Steady flash.
EXCLUDE	Normal.		Zone/s are Excluded.
LOW BATTERY	Normal.		The backup battery is low.
MAINS OFF	Normal.		Mains power is off.
PROG	Normal.	User Program Mode.	Installer Program Mode.
LINE	Normal	Dialler is on line.	Phone line fault or failure to communicate.

See page 16 for keypad indicators in Memory Mode.

This section describes the operation of a typical control panel installation. Keep in mind that your installation may vary depending on the selected options and equipment. The operating instructions which follow will cover the most common options.

Consult your installation company if you require further information.

All control panel operations are controlled by the keypad. You may also have optional Radio Keys or Access Control equipment installed.

OPERATING RULES

Generally, the panel will be Disarmed. Armed and Home modes provide different levels of security for your premises when you are home or away. Three other temporary modes: Program, Memory and Exclude, allow you to perform various operations. The panel will automatically exit from these temporary modes if you do not press any buttons on the keypad in a 4 minute period.

If you make a mistake while entering any codes, press the Enter or E button and start again.

When you are required to enter your access code, you are given five opportunities to enter it correctly. After the fifth invalid attempt the alarm is activated (requiring the correct code + E to silence the alarm). This prevents anyone trying to guess your code by entering random numbers.

AREA PARTITIONING

Area Partitioning allows the zones to be split into two partitions; Area1 and Area2.

The panel then effectively operates as two separate systems sharing only the siren outputs and dialler.

USER CODE ASSIGNMENT

A User Code assigned to an Area can Arm and Disarm only that Area. User Codes assigned to both Areas will operate both Areas simultaneously.

COMMON AREA ZONES

Zones assigned to both Areas are Armed only when Area1 and Area2 are both Armed. This allows the Common Area zone/s to be shared by both Areas.

For example, Office A and Office B operate as separate areas but the entrance foyer used by both offices is assigned to both areas meaning it will automatically Arm when both Areas have Armed. The Common Area then automatically disarms when either Area1 or Area2 Disarms.

AREA OPERATION

Arming and Disarming is carried out as normal from a single keypad or separate keypads installed in both areas or by Radio Key.

Area operation only applies to zones when they are in the Armed state. This means that Day, 24hr and Home zones are independent of the area operations.

Note: Area partitioning is in addition to Home Mode. Any zone may be allocated to any area.

CENTRAL STATION MONITORING

The Ness D8x and Ness D16x control panels have an on-board digital dialler which can send detailed alarm messages to a Central Monitoring Station.

The digital messages can include information about the zone or zones which caused the alarm, tamper alarms, low battery or mains failure reports, and it can also (by user number) identify the users who arm and disarm the system.

Central station monitoring is highly recommended and is the most effective method of monitoring your alarm system.

For further information about 24 hour monitoring, contact your installer or Ness Corporation.

AUDIBLE MONITORING

As a lower security alternative to central station monitoring, the panel can be programmed to send audible messages to a fixed or mobile phone.

When programmed for audible monitoring, the pane calls a pre-programmed number (or numbers) and sounds an audible alarm message and a series of beeps over the phone. These beeps can identify the zone or zones which caused the alarm and well as several other alarm types.

THE AUDIBLE MESSAGE

When triggered by an alarm, the panel will dial the programmed telephone number/s and output the audible message "ALARM, ALARM, ALARM" and beeps for 45 seconds or until it is acknowledged.

THE "FOLLOW ME" TELEPHONE NUMBER

If your panel is programmed for Audible Monitoring, it will make alarm calls to the Primary and Secondary telephone numbers programmed by your installer.

If a Follow Me Telephone Number is programmed, the Primary and Secondary telephone numbers will be ignored. All alarm calls will be sent to the Follow Me telephone Number.

If your panel is monitored by a Central Station, the Follow Me number is ignored.

ACKNOWLEDGING THE ALARM

The person receiving the call can acknowledge the alarm by pressing the **3** key on their telephone.

Press the **3** key during gaps in the alarm message.

Once you successfully acknowledge the alarm the panel will hang up and not ring any other telephone numbers.

If you do not acknowledge the alarm the panel will ring you again and then it will ring the next programmed telephone number, (if any).

Note: If the alarm is not acknowledged, the LINE light on the keypad will flash continuously until the panel is next armed.

Programming REAL TIME CLOCK			
STEP	KEYSTROKES	DESCRIPTION	COMMENT
1	P + [MASTER CODE] + E	Enters User Program Mode.	The Program light will turn on.
2	P + [] + E P340E MINUTES. Enter a value between 00 and 59. P341E HOURS. Enter a value between 00 and 23. P342E DAY OF THE MONTH. Enter a value between 01 and 31. Ensure that the setting does not exceed the days in the current month. The panel does not cross-check this setting. P343E MONTH. Enter a value between 01 and 12. P344E YEAR. Enter a value between 00 and 63. (2000–2063). P345E DAY OF THE WEEK. Enter a value between 1 and 7. (1=Sunday).	Enter the option number for one of the real Time Clock options.	The existing value, if any, will be displayed by the keypad one digit at a time.
3	[NEW VALUE] + E	Enter the new time in seconds. Example, enter 25 seconds as 25 + E.	The new time will be displayed by the keypad one digit at a time.
4	P + E	To exit User Program Mode.	The Program light will turn off.

Set the current date and time to ensure that AutoTime events take place as expected.

You will need to adjust the Hours setting when Daylight Savings starts and ends.

Clock memory is retained on power down.



KEYPAD OPTIONS

NESS KPX LCD KEYPAD

The Ness LCD keypad uses a large illuminated LCD display to show system and zone status. The large easy to read buttons are backlit for and a hinged flap covers the keys.

The LCD icon display provides information on zone condition, armed state, mains and battery condition and other information.



NESS SATURN KEYPAD

Proving that alarm keypads can be beautiful as well as functional - Saturn's elegant design adds a distinctive look and feel of luxury to your alarm system.

Available in White, Black and Ocean Mist, Saturn keypads are fully compatible with Ness D8x/D16x control panels version 6 and later.



NESS RADIO KEYS

The optional Ness Radio Keys give you the convenience of remote control operation. Multi-button operation allows you to Arm, Disarm and activate PANIC.

The RK4 Radio Key can also be programmed by your installer to activate an auxiliary output on the control panel.



NESS ACCESS CONTROL

D8x and D16x also have an access control option for arming/disarming and controlling electric door locks.

The panels have built-in software and hardware support for up to 3 Ness Weigand proximity card readers and up to 55 proximity cards or fobs.



NESS iCOMMS app for mobile control of your D8x/D16x control panel from home, office, anywhere in the world using your iPhone/iPad.

- Arm, Disarm • View zone status • Emergency alarms
- Control the panel outputs (D8x/D16x V7.8 and later)

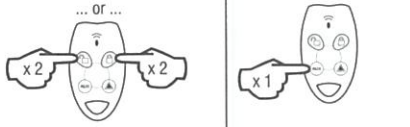
REQUIREMENTS:

D8x/D16x V5.6 or later (V7.8 or later to operate panel outputs).

Optional 101-244 Ethernet adapter, 450-185 RS232 cable. Order code ICOMMS-ASSY-K

iPhone/iPad not included. Search the Apple App Store for "iComms". iComms is a third party product which is endorsed by Ness without tech support. Emergency alarms must be enabled in the control panel to be available in iComms.

Note: Radio Keys and Access cards and readers are optional and are not supplied with any Ness control panel as standard. Ness radio products require a Ness Radio Interface (100-200) to be fitted to the control panel.

to arm HOME Mode	
by KEYPAD	by RADIO KEY
Press HOME + E (If the HOME MONITOR SHORTCUT is enabled).	Home Monitor arming by radio key must be enabled by your installer.
	
or press HOME + [USER CODE] + E	Press either the OFF button or the ON button twice within 4 seconds. Or press the AUX button once. (If enabled, RK4 radio key only).
	The strobe light will flash briefly.
	If required, your installer can program the external siren to chirp twice when arming Home mode.

Home mode allows you to Arm selected zones while others are ignored. Typically, perimeter zones (doors and windows) can be monitored while you are at home.

Your installer must program which zones will be active in Home mode.

If an alarm occurs while in Home mode, entering [User Code] **E** will silence the alarm. This will also Disarm the panel, so remember to re-arm Home mode again if needed.

Using the optional Radio Keys you can enter Home Mode by pressing either the OFF button or the ON button twice within 4 seconds or by pressing the AUX button, (RK4 radio key only). These options must be enabled by your installer.

Note: Home Mode and Area arming

Home Mode can be used if the panel is fully disarmed or if only Area2 is armed. Home Mode is not available when Area 1 is armed.

The panel can be armed in Home mode if Area2 is already armed on these conditions:

- Area 1 must be OFF.
- Area 2 must be armed first, and then Home Mode armed – not the reverse.
- Zones assigned to both Home mode and to Area 2 will act as Home Mode zones when both Area 2 and Home Mode are armed.

Note: Home Mode arming when Area2 is armed cannot be done by Radio Key or by keyswitch.

USER CODE	OPTION NO.	KEYPAD PIN
1 (Master Code)	P201E	123
2	P202E	
3	P203E	
4	P204E	
5	P205E	
6	P206E	
7	P207E	
8	P208E	
9	P209E	
10	P210E	
11	P211E	
12	P212E	
13	P213E	
14	P214E	
15	P215E	
16	P216E	
17	P217E	
18	P218E	
19	P219E	
20	P220E	
21	P221E	
22	P222E	
23	P223E	
24	P224E	
25	P225E	
26	P226E	
27	P227E	
28	P228E	

USER CODE	OPTION NO.	KEYPAD PIN
29	P229E	
30	P230E	
31	P231E	
32	P232E	
33	P233E	
34	P234E	
35	P235E	
36	P236E	
37	P237E	
38	P238E	
39	P239E	
40	P240E	
41	P241E	
42	P242E	
43	P243E	
44	P244E	
45	P245E	
46	P246E	
47	P247E	
48	P248E	
49	P249E	
50	P250E	
51	P251E	
52	P252E	
53	P253E	
54	P254E	
55	P255E	
56	P256E	

OPTION NO.	DESCRIPTION	DEFAULT	COMMENT
P26E	Entry Delay Time 1	20 (20 sec)	
P27E	Entry Delay Time 2	6 (60 sec)	This option works in multiples of 10. (6 = 60 sec).
P28E	Exit Delay Time	60 (60 sec)	
P00E	Follow Me Phone No.	blank	

Programming your Ness D8x or D16x is a simple process using the keypad.

To enter program mode you need to know your Master Code, which is user code number 1, (see the table on the next page).

TO ENTER PROGRAM MODE
press **(P)** + [MASTER CODE] + **(E)**

The factory default Master Code is: **123**

TO EXIT PROGRAM MODE
press **(P)** + **(E)**
The panel will automatically exit Program Mode if the keypad is inactive for 4 minutes.

USER CODES

The panel has 56 user codes which can be operated by keypad code (3-6 digit PIN), by optional radio key or by optional access cards.

To add, change or delete a keypad code, follow the steps on page 22.

The factory default Master Code is 123. You should re-program this code with a new code of your own choice.

TIMERS

You can also re-program the Entry Delay Time and Exit Delay Time if you need more or less time to exit and enter the premises.

REAL TIME CLOCK

Some features such as AutoTime rely on the onboard Real Time Clock. Set the current date and time to ensure events take place as expected.

You will need to adjust the Hours setting when Daylight Savings starts and ends.

TELEPHONE NUMBER

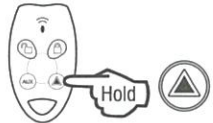
If your panel is programmed for Audible Monitoring, the panel's dialler will make alarm calls to the Primary and Secondary telephone numbers programmed by your installer.

If a 'Follow Me' Telephone Number is programmed, the Primary and Secondary telephone numbers will be ignored. All Audible Alarm calls will be sent to the Follow Me telephone Number.

This is handy if you, for example, stay at a relative's house overnight and you want the panel to call you there in the event of an alarm. When you delete the Follow Me Telephone Number, alarm calls will again be made to the Primary and secondary telephone numbers.

If your Ness panel is monitored by a Central Station, the Follow Me number is ignored.

For all other programming changes, talk to your installer.

PANIC alarm	
<p>by KEYPAD</p> <p>Press (*) (*) star keys together.</p> <p>or press (*) + [USER CODE] + (E)</p> <p>or press (*) + (E) (If KEYPAD PANIC SHORTCUT is enabled).</p>	<p>by RADIO KEY</p>  <p>Press and hold the PANIC button for at least 4 sec.</p> <p>NOTE. Your panel may be programmed for DOUBLE PRESS RADIO PANIC. To operate, press and hold the Panic button until the transmit LED turns on. Release the Panic button and immediately press and hold again until the transmit LED turns on a second time. This requirement meets regulations in some states of Australia.</p>

The keypad PANIC function may have been programmed to be either **AUDIBLE** to activate the sirens, or **SILENT** to send a PANIC report by dialler if your system is monitored by a Central Station.

PANIC cannot be used while the panel is in Program, Memory or Exclude mode.

Note: Your installer may have installed a separate PANIC button. To activate the panic alarm simply press that button.

Keypad DURESS alarm	
<p>by KEYPAD</p> <p>Press [5, 6, 8 OR 9] + [USER CODE] + (E)</p> <p>Add one these digits in front of a user code when disarming.</p> <p>This sequence will disarm the panel and send a Duress report by dialler if the system is monitored by a central station.</p>	

The DURESS alarm can be used to send a silent alarm to the central station that you are being forced to disarm the panel against your will. That is; you are disarming under "duress."

* THE KEYPAD DURESS IS NORMALLY NOT ENABLED. TO ENABLE THIS FUNCTION, CONSULT YOUR INSTALLER.

To disarm and send a DURESS alarm, prefix your User Code with one of the digits 5, 6, 8 or 9 when Disarming.

* DURESS ALARMS CAN ONLY USED BY SYSTEMS WHICH ARE MONITORED BY A CENTRAL STATION.

* THE DURESS ALARM CAN BE PROGRAMMED TO SOUND THE INTERNAL SIREN (RESET OUTPUT). THIS OPTION IS OFF BY DEFAULT.

Keypad MEDICAL alarm

by KEYPAD

Press **2** + **E**

Sends a Medical Alarm report by dialler.
(If this option has been enabled by your installer and the system is monitored by a central station).

The Medical Alarm does not sound the sirens.

Keypad FIRE alarm

by KEYPAD

Press **3** + **E**

Sounds the siren using the Fire Alarm sound.
(If Keypad Fire Alarm has been enabled by your installer).

And sends a Fire Alarm report by dialler.
(If this option has been enabled by your installer and the system is monitored by a central station).

AUTO-TIME OPERATION

WARNING PERIOD (Optional function - must be enabled by your installer.)

When an AutoTime event is about to begin, your keypad (or keypads) will begin a constant slow beep as a warning that the automatic event is about to happen. The warning beeps can be programmed to start up to 99 minutes prior to the AutoTime event.

Press any key on the keypad to stop the beeps during the warning period. The beeps will start again for the final minute at a faster rate.

FINAL MINUTE BEEPS. In the last minute prior to the AutoTime event, the keypad will beep at a faster rate to warn that the event is about to start.

TO DELAY THE AUTOTIME EVENT (Optional function - must be enabled by your installer.)

To delay the AutoTime event, enter a valid user code on its own. (The user code must be assigned to an Area to work). This will suspend the warning beeps and the AutoTime event for 1 hour - when the warning process will start again.


Example: Your panel is programmed to Auto Arm at 6pm every weekday and the Warning Period is programmed for 5 minutes. You are working back late and at 5:55pm your keypad begins to beep. Since you're not ready to arm the system yet, enter your user code (without pressing E) at the keypad. The warning beeps will stop and arming will be delayed by one hour. At 6:55pm the warning beeps will start again, followed by automatic arming if you don't delay the event again.

Any AutoTime event can be postponed, not just arming. You can also delay the automatic turn (or off) of one of the AUX outputs in the same manner.

MANUAL OPERATION OF THE AUX OUTPUTS (Optional function - must be enabled by your installer.)

As well as automatic operation by Auto Time, the four auxiliary outputs can also be operated manually by keypad. Use the keypad commands below to turn outputs on or off or pulse on¹.

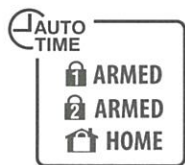
	To turn ON or PULSE	To turn OFF
AUX1	1 1 * [Siren]	1 1 [Siren] #
AUX2	2 2 * [Siren]	2 2 [Siren] #
AUX3	3 3 * [Siren]	3 3 [Siren] #
AUX4	4 4 * [Siren]	4 4 [Siren] #

 Manual operation of outputs works in conjunction with AutoTime schedules, if programmed. For example, if AutoTime has turned an output on as scheduled (say, a light) you can manually turn it off (and back on again) any time you wish. At the scheduled turn OFF time, if the output is still on it will be turned off.

¹ Whether an output "Pulses" or "Turns On" depends on the how that output has been programmed by your installer.

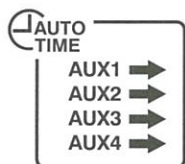
AUTO-TIME FEATURES

D8x/D16x V6 onwards features sophisticated new automation features making full use of the onboard Real Time Clock and a set of powerful yet simple to program options.



ARM or DISARM AUTOMATICALLY at pre-programmed times of day or day of the week.

This feature can save a site manager many headaches and hours of travel time. There is no need to rely on staff remembering to arm or disarm the system.



TURN AUX OUTPUTS ON or OFF at pre-programmed times - every day, once a week, anytime. Automate doors, sprinkler systems, lights and more.



ENABLE/DISABLE USER CODES depending on the time of day or day of the week. Allows managers to grant users access to the system at selected times and deny after hours entry.



If you find that the panel sometimes does not respond to user codes, or the panel arms or disarms itself or auxiliary outputs turn on automatically - then your panel may have been programmed for AutoTime events.

Ask your install to check the installer-level programming settings and reprogram the system to suit your needs.

How to EXCLUDE zones

by KEYPAD

Press **EXCLUDE** + **E**

(If the EXCLUDE SHORTCUT is enabled)

or press **EXCLUDE** + [USER CODE] + **E**

The Exclude light will turn on.

then press [ZONE No.] + **E** [ZONE No.] + **E** (Enter the zone number/s to be excluded.)

then press **E** to exit Exclude mode

The Exclude light flashes constantly while zones are excluded. Excluded zones are automatically included next time the panel is disarmed.

If there is a problem with a detection device and the zone cannot be sealed when arming the panel, then that zone can be Excluded so that it does not generate alarms.

When zones have been Excluded, the EXCLUDE light flashes continuously while the panel is Disarmed and also when Armed.

Zones can be excluded while the panel is either Disarmed or Armed. See notes below.

Zone Exclude is not permanent. Excluded zones are automatically included next time the panel is Disarmed.

Zones can be manually included by the same method as Excluding. Simply use the [ZONE No.] + **E** sequence to turn OFF the zone lights to be Included.

NOTES

- EXCLUDE E works only when the panel is Disarmed.
- EXCLUDE [User Code] E works in any state.
- EXCLUDE [User Code] E can only exclude the zones in the Area assigned to that code.

Viewing the EVENT MEMORY

by **KEYPAD**

Press **MEMORY** + **E** (If the VIEW MEMORY SHORTCUT is enabled).

or press **MEMORY** + [USER CODE] + **E** The Memory light will turn on.

Press **MEMORY** ...The most recent event will be displayed.

Press **MEMORY** ...The next most recent event will be displayed.

Press **MEMORY** ...and so on, up to 30 events.

Press **E** to exit Memory Mode.

The panel stores a comprehensive event memory, including Arming, Disarming, Low Battery, Mains Fail and Alarm events.

The memory is constantly upgraded and the last 30 events are always available for viewing.

This memory display can only be selected while the panel is in the Disarmed state.

TO CLEAR THE MEMORY LIGHT

The MEMORY light flashes continuously when an alarm has occurred as a reminder to view the alarm memory.

The MEMORY light stops flashing after the memory is viewed as shown above. and **the MEMORY light is automatically cleared next time the panel is Armed.**

KEYPAD DISPLAY INDICATORS IN MEMORY MODE

KEYPAD ICON	MEMORY EVENT
Zone numbers 1-8 or 1-16	Zone alarm
(no icons displayed)	Panel Disarmed
ARMED	Panel Armed (or Area 1 Armed)
ARM2	Area 2 Armed
MAINS	Mains power failure
BATTERY	Low Battery
TAMPER + 1	Internal Tamper alarm
TAMPER + 2	External Tamper alarm
EXCLUDE + 1	Panic alarm
EXCLUDE + 2	Medical alarm
EXCLUDE + 3	Fire alarm
LINE	Telephone line fail
RADIO, EXCLUDE	Radio Key Panic alarm
RADIO, BATTERY, ZONE	Radio Device battery low, (Device number is indicated by zone lights)
RADIO, BATTERY, ARM	Radio Key battery low, (Radio Key number is NOT indicated)
RADIO, TAMPER, ZONE	Radio Device tamper alarm (Device number is indicated by zone lights)
RADIO, HOME, ZONE	Radio Supervision alarm (Device number is indicated by zone lights)
HOME, ZONE	Wired Zone Supervision alarm (Zone number is indicated by zone lights)

The Ness D8x and D16x have a Temporary Day Zone feature which allows easy and flexible Day Zone selection and operation.

Temporary Day Zones operate in addition to Permanent Day Zones which are usually setup by the installer.

While remaining in normal operating mode, the user can add and remove 'Temporary Day Zones'.

As an extra feature, the user can easily enable or disable Day Mode, (which includes both Temporary and Permanent Day Zones).

Day Zones can be programmed by your installer to beep the keypad, or briefly sound the siren/s or flash the strobe light, or to sound an optional buzzer. (Although the keypad beeper provides sufficient warning in most situations).

TYPICAL APPLICATIONS

Day Zones are useful for a variety of applications such as a shop door beeper, triggered by a reed switch on the door.

For example, in a shop you could enable Day Mode to alert you when a customer enters the front door.

You can also enable additional Temporary Day Zones to monitor switches on, for example, the rear door or the fridge doors.

COMMANDS

(Accessed from normal operating mode).

Enter Selection Mode.

P + **E**

Press **P** followed by **E** when in operating mode to enter Temporary Day Zone selection mode.

Zone Selection.

[Zone No.] + **E**

To select or deselect zones to be Temporary Day Zones. The selected zones are indicated by the corresponding zone number.

Permanent Day Zones, (installer option P53E), are not displayed in selection mode. Permanent Day Zones can be selected as Temporary Day Zones but this has no effect as those zones are already day zones.

Exit Selection Mode.

E


Saves changes and returns to normal operating mode.

Enable Day Mode.

O + **E**

This enables/disables both Temporary and Permanent Day Zones.

When Day Mode is enabled, any unsealed day zone will sound the programmed output for 2 seconds. When Day Mode is disabled, an unsealed day zone will simply be indicated on the keypad as an unsealed zone.

 The MONITOR icon flashes continuously when Temporary Day Mode is enabled.