



Ness Security Products

D-8 Radio Receiver Interface for the Ness D-8 Alarm Control Panel *Product Manual*

INTRODUCTION.

The D8 alarm control panel has the option to use NESS RADIO PENDANTS and RADIO DETECTORS by connecting the D8 RADIO RECEIVER to the D8 via the 4 way socket on the D8 board assembly.

Pendant operation allows 14 different codes to ARM and DISARM the panel, generate PANIC reports and LOW BATTERY reports.

Radio detector operation allows 8 different codes and works in parallel with the 8 zone inputs.

Depending on the type of alarm detector ALARM, ALARM RESTORE, TAMPER and LOW BATTERY REPORTS will be generated.

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PROGRAMMING

RADIO TEST

Before attempting programming of PENDANTS and RADIO DETECTORS check that the D8 RADIO receiver is installed and operating.

Observe the KEYPAD RADIO light and activate any NESS PENDANT or RADIO DETECTOR.

The D8 will flash the RADIO light ON if **ANY** signal is correctly detected.

This occurs whether the PENDANT or RADIO DETECTOR has been previously programmed in or not.

PENDANTS

Programming PENDANTS is a **2 stage** process.

1st stage. Assign the P12E to P25E access codes to PENDANTS with the P09E - P10E options. This can only be done in Install or Remote programming modes.

2nd stage. Select the P12E - P25E option and enable the radio code to be read in. This can be done in all programming modes.

This means the Client can change PENDANT codes but cannot change which codes are assigned to either KEYPAD or PENDANT operation.

Assign Access Code 2-15 to PENDANT

P09E - P10E

User Access Codes 2 to 15 are *assigned* to **Pendants** with these options.

Entering P09E displays **User Codes 2 to 8** that are **PENDANT** code selected.

Entering P10E displays **User Codes 9 to 15** that are **PENDANT** code selected (*with code 9 status displayed on zone 1 etc*).

Now enter the User Code number to either select or delete PENDANT operation.

For P09E: ACCESS codes selected as PENDANT are shown on the ZONE 2-8 lights.

Use the keys 2-8 to either select or deselect PENDANTS from Users 2-8.

For P10E: ACCESS codes selected as PENDANT are shown on the ZONE 1-7 lights.

Use the keys 1-7 to either select or deselect PENDANTS from Users 9-15.

Factory Pre-set: 0 (*User codes assigned to KEYPAD*)

Program Access Levels: Install, Remote

User Access Codes

P11E - P25E

A User Access Code is the code a client uses to operate the panel. The D8 has a total of 15 User Access Codes. These codes are assigned user numbers 1 to 15 (options P11E to P25E).

There are 2 types of codes that can be used - from the KEYPAD or from a PENDANT.

User codes can be selected to be either KEYPAD or PENDANT accessed (see P09E, P10E).

PENDANT ACCESS CODE programming:

User Access Code 1 is the MASTER code and is the only code which can access Client Program Mode. It is always a KEYPAD access code.

PENDANT PROGRAMMING is always done by RADIO - the PENDANT codes cannot be entered at the keypad.

Pendant codes can only be cleared at the Keypad. Existing codes are not removed by radio signals.

To *PROGRAM* a PENDANT :

i) Select the User Access Code (P12 E to P25 E).

ii) Select 1E to enable the PENDANT learning.

If the Access Code is not already programmed then the READY light will come ON and 3 beeps are given.

If the Access Code is already programmed then the READY light will NOT come on and a warning beep is given. The existing code must be cleared (Keypad 0E) before a new code is allowed to be programmed.

iii) *Press a button on the PENDANT to be programmed.*

iv) The RADIO light should come ON indicating a code is being received.

If the received code is recognised as a PENDANT type then:

iv) If it is a new code the READY light will go OFF and 3 beeps are given. The PENDANT has been programmed to the assigned Access User Code.

iv) If it is NOT a new code the READY light will stay ON and a warning beep is given. This means that the PENDANT code is already assigned to a different User Code and must be cleared from that User Code before programming to the new Access User Code.

To clear a PENDANT:

i) Select the User Access Code (P12 E to P25 E).

ii) Select 0E to clear the PENDANT. The response is 3 beeps.

Example:

1. To program User 2 to a PENDANT.

i) Enter: P09E.

ii) If the **Zone 2** light is **not ON** then enter: 2E.
User Access Code 2 is now a PENDANT TYPE.

iii) Enter: P12E 1E.
The READY light is now ON.

iv) Press a PENDANT button.
RADIO light will flash, READY will go OFF and 3 beeps signal programming now done.

Program Access Levels: User, Install, Remote

Factory Pre-set: Master Code is set to KEYPAD code 123 and all other user codes are cleared.

RADIO DETECTORS

Program or Clear Zone 1 Radio Device Code

P01E-P08E

These 8 options are used to assign RADIO DEVICES to ZONE INPUTS.

NOTES:

- i) RADIO DEVICE programming is always done by RADIO - codes cannot be entered at the keypad.
- ii) A Radio Device must be assigned to a ZONE and then the code programmed to the D8 panel.
- iii) Some RADIO DEVICE types send separate ALARM and ALARM RESTORE signals.
The D8 must be programmed to correctly process this ALARM RESTORE in normal operation.
RADIO DEVICE codes can only be cleared at the Keypad. Existing codes are not removed by radio signals.

1. To *program* a RADIO DEVICE *without* ALARM RESTORE: This is typical for RADIO PIR detectors.

i) Select the Zone Access Code (P01E to P08E). The response is 3 beeps.
If a RADIO DEVICE code already exists then the ARMED light is ON.

ii) If the ARMED light is NOT ON then select 1E to enable the RADIO DEVICE programming. The READY light will come ON and 3 beeps are given.
If the ARMED light is ON then selecting 1E gives a warning beep. The existing code must be removed (Keypad 0E) before a new code is allowed.

iii) *Activate the RADIO DEVICE to be programmed by triggering an alarm.*

iv) The RADIO light should come ON indicating a code is being received.
If the received code is recognised as a RADIO DEVICE type then:

- v) If it is a NEW code then the response is 3 beeps, the READY light will go OFF and the ARMED light will come ON. The RADIO DEVICE has been programmed.
The MEMORY light is OFF. This is a non ALARM RESTORE type RADIO DEVICE (ie PIR).

If it is an EXISTING code then a warning beep is given and the READY light will stay ON to indicate that this RADIO DEVICE is already programmed to another Zone and no programming has occurred.

2. To *program* a RADIO DEVICE with ALARM RESTORE: This is typical of radio reed switches.
- i) Alarm the RADIO DEVICE and leave it in the alarmed state (ie for a radio reed move the magnet away from the detector). Wait until RADIO transmission has stopped.
- ii) Select the Zone Access Code (P01E to P08E). The response is 3 beeps.
If a RADIO DEVICE code already exists then the ARMED light is ON.
If a RADIO DEVICE sends ALARM RESTORE signals then the MEMORY light is ON.
- iii) Select 1E to enable the RADIO DEVICE programming. The READY light will come ON.
- iv) Activate *the RADIO DEVICE to be programmed by restoring the alarm* (bring the magnet back to the device and leave there).
- v) The RADIO light should come ON indicating a code is being received.

- v) If it is a NEW code then the response is 3 beeps, the READY light will go OFF and the ARMED light will come ON. The RADIO DEVICE has been programmed.
The MEMORY light is also ON. This is a ALARM RESTORE type RADIO DEVICE (ie RADIO REED).

If it is an EXISTING code then a warning beep is given and the READY light will stay ON to indicate that this RADIO DEVICE is already programmed to another Zone and no programming has occurred.

Note:

1. To clear a RADIO DEVICE:
- i) Select the Zone Access Code (P01E to P08E). The response is 3 beeps.
- ii) Select 0E to clear any existing code.
The response is 3 beeps and the ARMED light will be OFF .
2. To change the RADIO DEVICE ALARM RESTORE option:
- i) Select the Zone Access Code (P01E to P08E). The response is 3 beeps.
- ii) Select 2E to toggle the ALARM RESTORE option.
The response is 3 beeps and the MEMORY light will indicate the new ALARM RESTORE programming.

Examples:

1. Zone 4 to program a new RADIO DEVICE: P 04E 1E then *TRIGGER the RADIO DEVICE*.
2. To delete Zone 5 RADIO DEVICE: P05E 0E

Program Access Levels: Install, Remote

Factory Pre-set: All device codes are cleared.

OPERATION

RADIO TEST

Before attempting operation of PENDANTS and RADIO DETECTORS check that the D8 RADIO receiver is installed and operating.

Observe the KEYPAD RADIO light and activate any NESS PENDANT or RADIO DETECTOR.

The D8 will flash the RADIO light ON if **ANY** signal is correctly detected.

This occurs whether the PENDANT or RADIO DETECTOR has been previously programmed in or not.

PENDANTS

NESS Pendants generate signals when the ON, OFF or PANIC buttons are pressed. A LOW BATTERY can also be include with these signals.

Pendants are assigned to USER ACCESS codes.

ON BUTTON.

Pressing the ON button has the same affect as entering ARM plus USER CODE at the keypad.

Either or both AREAS, for instance, (as programmed by the P47E, P48E, P49E, P50E) can be ARMED by this command.

OFF BUTTON.

Pressing the OFF button has the same effect as entering a USER CODE at the keypad.

AREAS, for instance, (as programmed by the P47E, P48E, P49E, P50E) are DISARMED by this command.

OFF BUTTON for MONITOR MODE .

MONITOR MODE can be activated if :

1. Zones have been assigned with the P51E monitor zone option.
2. The panel is not ARMED.
2. The OFF button is pressed twice within in 4 -5 secs.

PANIC BUTTON.

Pressing the PANIC button has the same effect as entering a PANIC at the keypad.

It is identified in the HISTORY and DIALLER reports.

LOW BATTERY.

A low battery gives 10 beeps and flashes the RADIO & the BATTERY light.

This warning occurs every time the low battery pendant is used.

The flashing lights stop when any key on the keypad is pressed or a pendant code with no low battery is received.

It is identified **ONCE** only in the HISTORY until the low battery is fixed and a restore report is received.

RADIO DETECTORS

NESS RADIO DETECTORS can generate ALARM, ALARM RESTORE, TAMPER and LOW BATTERY reports.

Not all NESS RADIO DETECTORS generate ALARM RESTORE signals.

ALARM REPORT.

1. A RADIO DEVICE operates in parallel with the existing Z1 - Z8 terminal block zone input. They can be used together and will generate the same results.
2. A RADIO DEVICE programmed to ZONE 8 will still work as an alarm even if the Z8 input operation has been changed to keyswitch operation. The P60E 2E and 3E options only affect the Z8 terminal inputs.
3. Radio device zone signals IGNORE the P30E - P38E **normal or vibration sensor** settings.

ALARM RESTORE REPORT.

1. Some RADIO DEVICE types send separate ALARM and ALARM RESTORE signals. The D8 must also be programmed to correctly process this ALARM RESTORE in normal operation.

The differences in operation :

i) ALARM only programmed:

- a) The ZONE display follows the RADIO signal while an ALARM report is being received.
- b) An ALARM restore occurs automatically when the ALARM report stops being received.
- c) Auto excludes cannot occur.

ii) ALARM and ALARM RESTORE programmed:

- a) The ZONE display comes ON and stays ON when an ALARM report is received.
- b) An auto exclude will occur (at the end of exit time) if no ALARM RESTORE report has been subsequently received.

- c) The ZONE display goes OFF and stays OFF when an ALARM RESTORE report is received.

TAMPER REPORT

RADIO DETECTOR TAMPER operation depends on the ARMED state of the D8.

A RADIO TAMPER always causes the keypad to continuously beep and also to flash the RADIO, TAMPER and the ZONE (identifying the detector) lights.

Pressing any key on the keypad or sending a TAMPER RESTORE will clear this warning.

DISARMED: There are no dialler reports or history reports. This allows battery changing without generating alarms.

ARMED: All the programmed TAMPER actions are actioned including HISTORY and DIALLER reports.

LOW BATTERY REPORT

A low battery gives 10 beeps and flashes the RADIO & the BATTERY light. The ZONE light identifying the radio device is also ON.

The flashing lights stop when any key on the keypad is pressed or a detector code with no low battery is received.

It generates HISTORY and DIALLER reports **ONCE** only (until the low battery is fixed and a restore report is received).

MEMORY DISPLAY

The radio events are also recorded in the User Alarm Memory.

When viewed using the <**MEMORY**> <**ENTER**> keys the following is displayed :

PENDANTS

ACTION	MEMORY DISPLAY
ON	ARMED and/or ARM2
OFF	NO DISPLAY (disarm)
PANIC	RADIO and EXCLUDE
LOW BATTERY	RADIO and BATTERY and ARMED

RADIO DETECTORS

ACTION	MEMORY DISPLAY
ALARM	ZONE
TAMPER	RADIO and TAMPER and ZONE
LOW BATTERY	RADIO and BATTERY and ZONE

See D8 User Manual (890-136) for more details on ALARM MEMORY.

SIGNAL STRENGTH

SIGNAL STRENGTH can be used in User Program Mode and Install Program mode to check the operation of pendants and detectors. The strength of the radio signal received is displayed on the zone leds and beeped out. The higher the number displayed (and beeped out) the stronger the signal received.

OPERATION

1. User Program Mode

Note that User Program mode returns to normal operation after 4 minutes.

Pendants

The signal strength of pendants can be checked either for a particular pendant or any pendant.

1. Enter P<User Code>E to go to User Mode.
2. Enter one of the Program Options P12E - P25E that have been set for Pendant operation.
ie if code 2 has been assigned to a pendant enter P12E.
3. If 3E is now entered then a signal reading is shown only for the pendant assigned to that code.
Other pendants are ignored in this case.
4. If 4E is entered then the signal reading is shown for any pendant that is then activated.
5. The signal strength reading remains until another command is entered.

NOTE:

- i) Signal strength is displayed on the zone lights and is also beeped out.
- ii) Zone 1 is a minimum signal and must be considered marginal.
- iii) Zone 8 is a strong signal.
- iv) Signal strength is *not done* when programming a new code (using the 1E option).

Radio detectors

Radio detectors cannot be tested in this mode.

Install Program Mode

Pendants

To check the signal strength of pendants:

1. Go to Install Mode.
2. Enter one of the Program Options P12E - P25E that have been set for Pendant operation.
ie if code 2 has been assigned to a pendant enter P12E.
3. If 3E is now entered then a signal reading is shown only for the pendant assigned to that code.
Other pendants are ignored in this case.
4. If 4E is entered then the signal reading is shown for any pendant that is then activated.
5. The signal strength reading remains until another command is entered.

NOTE:

- i) Signal strength is displayed on the zone lights and is also beeped out.
- ii) Zone 1 is a minimum signal and must be considered marginal.
- iii) Zone 8 is a strong signal.
- iv) Signal strength is *not done* when programming a new code (using the 1E option).

Radio detectors

To check the signal strength of Radio Devices:

1. Go to Install Mode.
2. Enter one of the Program Options P01E to P08E.
3. If 3E is now entered then a signal reading is shown only for the detector assigned to that code.
Other detectors are ignored in this case.
4. If 4E is entered then the signal reading is shown for any detector that is then activated.
5. The signal strength reading remains until another command is entered.
3. Transmissions from *any Radio Device* will now be received and their signal strength displayed on the zone lights.
Zone 1 is a minimum signal and must be considered marginal.
Zone 8 is a strong signal.
Signal strength is *not done* when programming a new code (using the 1E option).