

# DRAFT

**Lab No.2:** Programming a intrusion detection system (IDS)

**First name:** \_\_\_\_\_

## Goals:

1. Recognize basic instructions to program an intrusion detection system.
2. Declare areas in intrusion detection system.
3. Schedule, detect faults in intrusion detection system.

## Theory

Your security system consists of a control panel, one or more keypads and various sensors and detectors. The control panel will be armed out of sight, in a quarter of profits or basement. The metal box contains the system electronics, fuses and emergency battery.

**NOTE: Only the installer or service professional should have access to the control panel.**

All keypads have an audible indicator and command entry keys.

LED keypads They have a group of status lights zones and system. He

LCD keypad has a liquid crystal display (LCD) Alphanumeric. The keypad is used to send commands to the system and display the current status of the system. He

(The) keyboard (s) be mounted in a convenient location inside the protected premises close (s) to (s) door (s) of input / output.

The security system has several zones of area protection and each of these zones will be connected to one or more sensors (motion detectors, glassbreak detectors, door contacts, etc.). A sensor in alarm will be indicated by flashing light corresponding to the area on a keyboard LED or

by a message written on an LCD keypad.





Press the power key on the LCD keyboard keypad if an error has occurred on the LED keyboard user keypad.

### **(\*) (Commands)**

- (\*)(1)** Inhibiting (not activated) / Unsuspending Permanence / Lejanía areas (activated)
- (\*)(2)** Displays trouble conditions (troubles)
- (\*)(3)** Displays alarm memories
- (\*)(4)** Enables or disables the ring (chime)
- (\*)(5)** User programming code
- (\*)(6)** User commands
- (\*)(7)** Command functions
- (\*)(8)** installer programming
- (\*)(9) (code)** Setting no entry
- (\*)(0)** Activation (OFF state) / fast output (ON state)

### **Trouble Conditions**

When a trouble condition is detected, the Trouble  the system will turn on, and the keypad will beep every 10 seconds. Press the # key to silence the beeps. Press \* 2 to display trouble conditions.

Problem indicator  system will flash. The corresponding problem will be represented by numbers 1-8.

PC1616-1832-1864\_UM\_ENG\_V4-7\_R001 August 12 2017 for errors code list.pdf (SECURED) - Adobe Acrobat Pro

File Edit View Window Help

Create

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Tools Comment

LED/ DIGIT	Trouble Condition	Comments	Action
1	Service Required (Press [1] for more details)	(1) Low Battery (2) Bell Circuit (3) System Trouble (4) System Tamper (5) Module Supervision (6) RF Jam Detected (7) PC5204 Low Battery (8) PC5204 AC Failure	Call for service
2	Loss of AC Power	If the building and/or neighbourhood has lost electrical power, the system will continue to operate on battery for several hours.	Call for service
3	Telephone Line Fault	The system has detected that the telephone line is disconnected.	Call for service
4	Failure to Com- municate	The system attempted to communicate with the monitoring station, but failed. This may be due to Trouble 3.	Call for service
5	Sensor (or Zone) Fault	The system is experiencing difficulties with one or more sensors on the system. Press 5 to display the zone.	Call for service
6	Sensor (or Zone) Tamper	The system has detected a tamper condition with one or more sensors on the system. Press 6 to display the zone.	Call for service
7	Sensor (or Zone) Low Battery	The system has detected a low battery condition with one or more modules/sensors on the system. Continue to press 7 to display the zone, keypad, wireless key(s) and RF Delinquency low battery conditions. Press 7 again to see zone troubles.	Call for service
8	Loss of Time & Date	If complete power was lost (AC and Battery), the time and date will need to be re-programmed.	Re-program Time & Date (page 6)

**Trouble Menu Acknowledgment**

**The student must be supported in the table above should eliminate the problems present in the sistema. Para the event of failure on the telephone line into Section 015 and turn off the option 7 (TLM Enable)**

- **To disable the phone line: \*8 5555 015 7 ##**

### Programming Time and Date

1. Press \* 6, User Code (1234)
2. Press 1 to select Time and Date (Time & Date)
3. Between the time 24h format (HH: MM), followed by the date (MM: DD: AA)
4. Press # to exit programming

5. If you have an issue date and time, press [8] on the menu problems. Press 1 to select Time and Date (Time & Date). Enter the time in 24h format (HH: MM), followed by the date.

**Example: to 6:00 pm, July 25, 2017, (18) (00) (07) (25) (17)**

### **Altering Brightness / Contrast**

When this option is selected, the keyboard allows you to select from 4 different backlight levels. Level 0 disables the backlight.

1. Press \* 6, User Code (1234).
2. Use the > key to move through the 4 different levels of light background.
3. The level is automatically saved when you press # to exit.

### **Altering the level of Sirena**

1. Press \* 6, User Code (1234).
2. Use the < key to move through 21 levels siren.
3. The level is automatically saved when you press # to exit.

### **Defining Zones**

To define the areas fences must enter the sections (001) to (004). To define the wireless zones, enter the section (804).

Here is a list of definitions of common areas:

- **definition 01** Delay = 1 (when the system is activated, it provides an entry delay when violated, following the delay Input1)
- **definition 02** Delay 2 = (when the system is activated, it provides an entry delay when violated, follows the Entry Delay 2)
- **definition 03** = Instant (when the system is activated, instant alarm went off when there is violation)
- **definition 04** = Interior (when the system is armed, instant alarm will ring first when there is violation of the zone, the instant alarm will follow the entry delay if entry delay is activated).
- **definition 05** = Interior Permanence / Lejanía (panel bypass the zone if the system is activated mode retention).
- **definition 08** = Standard 24-hour fire (instant alarm and communication when violated)

In our system first exercise will be defined two zones:

**Zone 1**- front door sensor wiring (Definition 01 = Delay 1)

**zone 2**- Motion Detector (PIR) (Definition 05 = Interior Stay / Lejanía)

### **Programming the hardwired zones (Zone 1 and Zone 2)**

1. \* 8 Installer Code (5555)
2. 001 (Zone Definition)
3. 01 (Zone 1, Delay)
4. 05 (Zone 2, Interior Stay / Lejanía)
5. 03 (Zone 3)
6. 00 (Zone 4)
7. 00 (Zone 5)
8. 00 (Zone 6)
9. #

Defining system time (Section (005))

1. 005 (Section to define system time)
2. 01 (Partition 1)
3. 030 (Debounce 1)
4. 030 (entry delay 2)
5. 030 (Output Delay)
6. ##

**Check system operation modes for Permanence (Stay) and Lejanía (Away) activating sensors zones 1 and 2.**

In the second exercise will be added a third instant wireless zone.

### **Programming the wireless zone (Zone 3)**

1. \* 8 Installer Code (5555)
2. 804 (Definition: Wireless Zone)
3. 03 (Zone 3)
4. Enter the electronic serial number of the device (Example: 29 \* 5 \* 2 \* 4 \* 1)
5. #
6. 001 (Zone Definition) (Not necessary if declared in the step above)
7. 03 (Instant)
8. #
9. **103** (should be checked , should be 109 for zone 9 as wireless)(Attribute Zone)
10. 8 (Attribute Wireless Zone)
11. ## to go out

Once declared area must enter zone assignment to a partition, Partition 1 in this case, areas 1-6 and disable areas are not used (in our case the zones 4, 5, 6). The sequence of steps is:

1. \* 8 Installer Code (5555)
2. Allocated areas 202 to a specific partition
3. 4 (unused area)
4. 5 (unused area)
5. 6 (unused area)
6. ## to go out

Testing the wireless device.

1. \* 8 Installer Code (5555)
2. 904 (Test placement wireless module)
3. Contact opening and closing moving the magnet unit via the siren or keyboard:
  - 1 touch of siren or 1 in the display indicate good location
  - 3 touches siren or a 3 on the display shows bad location
4. ## to go out

### **Section (013) First System Options** (<https://www.youtube.com/watch?v=Y1s-n1bF5G4>) (time 8:22)

If you are using resistors should not be concerned by this section, as in our case, otherwise it is necessary to set Option 1 as normally closed loop. The procedure would be:

1. \* 8 Installer Code (5555)
2. 013
3. Options 3, 5, 6, 7 default (default) appears on active display
4. Press 1 to activate (normally closed loop) Option 1
5. ##

### **Bypassing Zones (Bypass)**

Use Resource inhibition zone when you need to access a protected area while the system is armed, or when a zone is temporarily out of service, but you need to arm the system. Bypassed zones will not sound alarms. Inhibition zones reduces the level of security. If it be inhibiting an area not to be working, call a service technician immediately so that the problem can be resolved and your system working again. Certify that no area has been inhibited unintentionally when arming the system. Zones can not be bypassed once the system is armed. Bypassed zones are automatically canceled each time the system is disarmed and must be bypassed again, if any, before assembling again.

Start with disarming the system

1. Press \* 1, user code (1234)
2. Among the (ID) number (s) of two digit (s) area (s) to be (n) inhibited (s) (01-64).
3. desinhibir an area between the two-digit number of the desired area (01-64).
4. To exit inhibition and return to Ready, press #.

### **Bypassed zones activating**

To enable bypassed zones:

1. Press \* 1, then your [user code (1234)].
2. Enter two digits of the area to inhibit
3. To exit bypassing mode and return to Ready, press #.

### **Viewing Bypassed zones**

To recall the last set of bypassed zones:

1. Press \* 1, and then the user code] (1234).
2. To exit inhibition and return to Ready, press #.

### **Alarm Memory**

When an alarm occurs, the Memory or System indicator (and Fire indicator, if applicable) will light. To verify that (s) sensor (s) generated (Aron) the alarm, press \* 3. The indicator or system memory and corresponding sensor number will flash (eg sensor 3). Press # to exit.

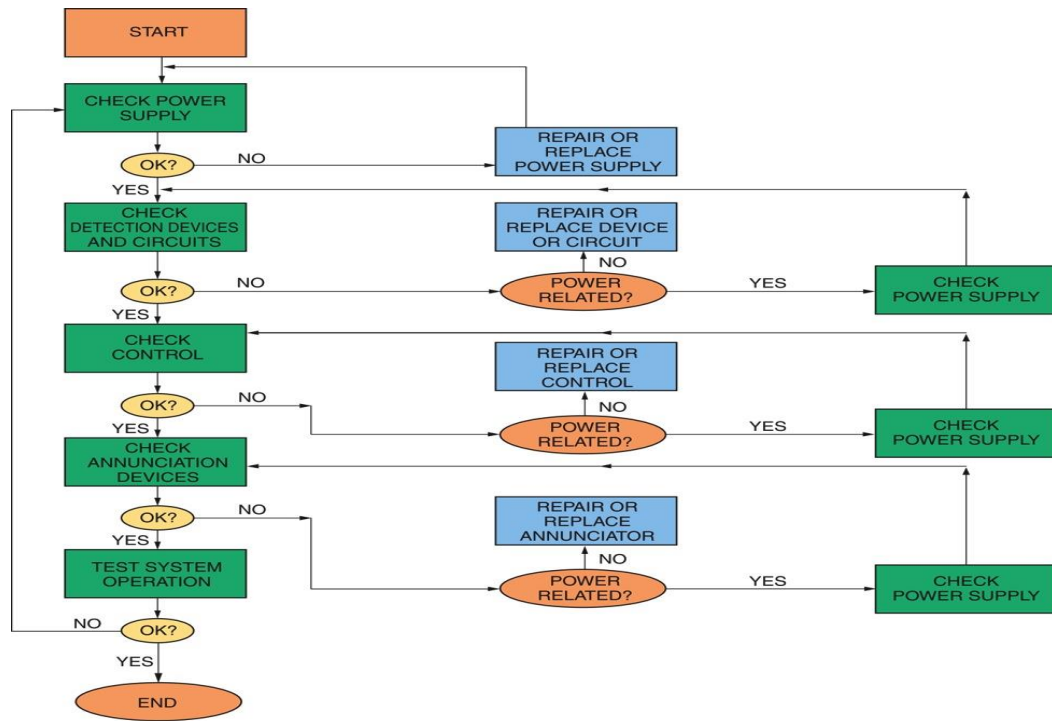
If an alarm sounded while armed, the keypad will automatically go to alarm memory when the system it be disarmed. In this case, you should be approached with caution as an intruder may still be inside the building / installation.

### **Panel restoring to factory conditions**

1. \* 8 Installer Code (5555)
2. 999 (Section default) (default)
3. 5555
4. 999
5. #

### **Troubleshooting**

The student should detect problems supported by the multimeter and following a guide as the following system:



33407-11\_F38.EPS