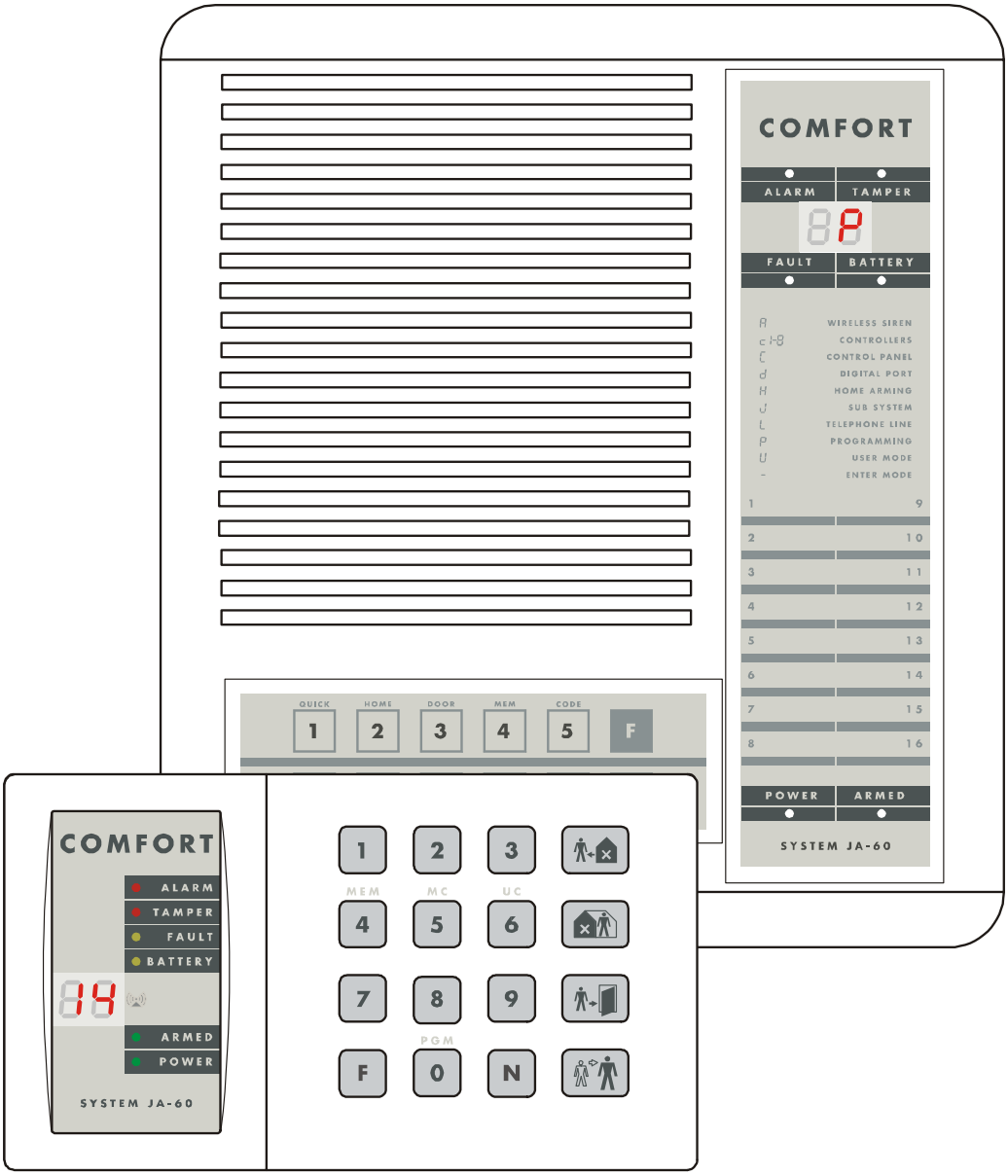
# JA-60 *"COMFORT"* Alarm system
# Installation manual

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## Contents:


**1. Before starting 4**
**2. Control panel installation 4**
2.1. Opening of the control panel 4
2.2. Attaching the control panel to the wall 4
2.3. Antenna installation 4
2.4. Connection of the AC adapter 4
2.5 Connection of the telephone line 5
2.6. Back up battery installation 5
2.7. Powering of the control panel 5
**3. Installation of detectors 5**
3.1. JA-60N - magnetic door detector installation 5
3.2. JA-60P - motion detector installation 6
**4. Enrollment of detectors and remote controls 7**
4.1. Procedure for enrolling detectors and controllers 7
4.2. Enrollment or deletion of a detector or controller to/from a desired position (zone) 7
**5. Testing of detectors and controllers 8**
5.1. JA-60N magnetic door detector testing 8
5.2. JA-60P motion detector testing 8
5.3. Remote control and keypad testing 8
5.4. Recording a detector's location 9
**6. Finishing of the installation 9**
6.1. Specifications 9
**7. Wiring of external devices 10**
7.1. Terminals in the control panel 10
7.2. Use of external sensors with the JA-60N 11
**8. Control panel programming 11**
8.1. Testing of the system 12
8.2. Enrollment (teaching) of wireless items 13
8.3. Exit delay 13
8.4. Entrance delay 13
8.5. Alarm duration 13
8.6. PgX and PgY outputs function 13
8.7. User recorded message and phone numbers editing in the user mode 14
8.8. Radio signal jamming testing 14
8.9. Regular communication checking 14
8.10. Reset enabled 14
8.11. Enrollment of the control panel to a UC-216, 222, JA-60K etc. 15
8.12 No code requested for F1, F2, F3, F4, F8 & F9 15
8.13. Partial arming with F2 (not split system) 15
8.14. Siren alarm 15
8.15. Exit delay audible indication 16
8.16. Partial arming exit delay audible indication 16
8.17. Entrance delay audible indication 16
8.18. Arming and disarming chirp sounds 16
8.19. Siren alarm in Disarm & Split arming or disarming 16
8.20. Wireless siren alarm 17
8.21. Indication of system problems when arming 17
8.22. Control panel splitting 17
8.23. Addressing of detectors to sections 17
8.24. Addressing of the user codes to sections 17
8.25. Addressing of wireless controllers to sections 18
8.26. Automatic arming / disarming setting 18
8.27. Real time and date setting 18
8.28. New service code setting 19
8.29. User Mode entering 19
**9. Voice & Pager messages setting 20**
9.1. Telephone numbers entering 20
9.2. Voice message recording 21
9.3. Telephone dialer testing 21
9.4. Dialing method 21
9.5. Telephone dialer triggering* 22
9.6. Telephone line checking 22
**10. To enable a remote computer to dial in 23**
10.1. Reaction to an incoming call 23
10.2. Remote access code setting 23
**11. Factory default RESET 23**
**12. Monitoring station communication setting 24**
12.1. Reporting code setting 24
12.2. Account code setting 25
12.3 Protocol and Format setting 25
12.4. Re-dialing pause setting 25
12.5. Phone number entering 26
12.6. Digital communicator reset 26
**13. Monitoring station reporting codes table 27**
13.1. Internal structure of Contact ID protocol 28
**14. Personal Computer Interface with JA-60 29**
**15. Remote access to the system 29**
**16. Recommended Professional installer basic rules 30**
**17. Trouble shooting table 30**
**18. Possibilities to extend the system 31**
18.1 Extension of the system with a subsystem 31
**19. Overview of the JA-60 parts 32**


*This manual is valid for control panel model **JA-60KX**, SW versions **FM61215** (control panel board) and **DY61232** (telephone communicator board).*
*The use of Comlink Windows v. 58 software or higher is required with this control panel, and can be obtained from our home page at WWW.JABLOTRON.CZ*

Thank you for purchasing a Jablotron alarm system. Its reliable operation depends on proper installation. We recommend having this alarm professionally installed. To find a qualified installer, please contact your Jablotron Distributor. The manufacturer assumes no liability for damages caused by incorrect installation or improper use of this system.

Fig. 1

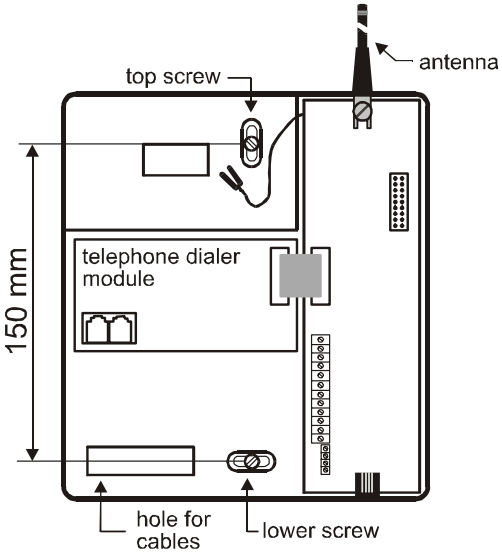



Fig.2

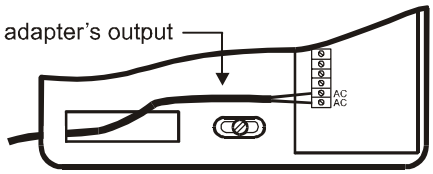



**Fig. 3 15VAC adapter connection**

# 1. Before starting

First select suitable locations for all sensors and accessories. The location of these sensors should take into consideration the building's safety and basic rules for good radio communication. The working range of the wireless accessories from the control panel is about 100 meters under optimal conditions. However, building materials can absorb or obstruct radio signals, and communication can also be effected by interference from other radio signals. For these reasons, you should anticipate a shorter working range for indoor installations. The control panel checks the radio signals during the installation and if the quality of communication with any accessory is not sufficient, this item will not be enrolled into the system. No part of the system, except the outdoor siren, JA-60A, is suitable for outdoor use.

You can connect your PC to the JA-60 control panel, using the PC-60A connecting cable and the Comlink software (see part 14). This option is convenient for easy programming, diagnostics and storing data about the installation.

# 2. Control panel installation

The control panel should be easily accessible, but not very visible. There should be a power socket available and also a telephone line (if the system has an optional built in dialer).

**Note:** Only a qualified technician can provide the installation, telephone line connection and servicing. User is not allowed to open the cover and/or make any modification.

## 2.1. Opening of the control panel

- Press in the bottom tab via the small slot using a narrow flat screwdriver.
- Remove the cover and gently pull the cable to disconnect it from the board.

## 2.2. Attaching the control panel to the wall

The surface of the wall should be level. Avoid placing the panel in locations that will result in the antenna being near any large metal objects.

- There are two slots for screws on the back side of the rear panel.
- Drill a hole and insert one of the provided plastic dowels for the top screw.
- Partially tighten the screw, leaving part of its head sticking out.
- Place the rear housing over the screw and slide it down so that the screw is in the middle of the slot.
- Now mark the position of the lower screw through the housing hole and remove the housing. Drill the second hole and insert a second plastic dowel.
- Replace the housing on the top screw once again.
- Do not tighten the lower screw until after the control panel cables are routed (AC adapter, tel. line, additional siren etc. – see description bellow).

## 2.3. Antenna installation

- Attach the rubber antenna into the hole on the right hand side by the screw on the internal board.
- The AN-01 optional external antenna can be used to improve the radio communication of the control panel. The AN marked connector for the optional antenna is located on the upper end of the control panel board. If the optional external antenna is connected, the rubber antenna must not be used.

## 2.4. Connection of the AC adapter

- Route the adapter's output cable (15VAC) to the control panel and connect it to the panel's terminals marked AC (see fig. 3.) – arbitrary polarity. **Do not plug the AC adapter into the wall yet.**

  ***Use only adapter SELV***

## 2.5 Connection of the telephone line

(only for models with an optional built in dialer)

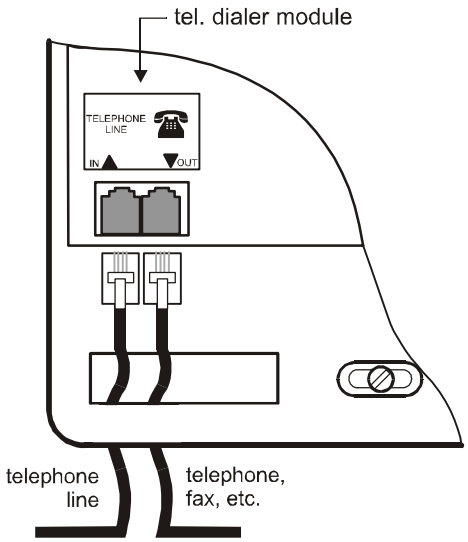



**Fig.4 TNV-3 telephone line connection**

- Use the provided telephone cable to connect the telephone line to the IN jack inside the control panel (see fig. 4),
- Connect any telephone, fax or other phone operated device to the OUT jack, marked with a phone symbol
- When the control panel is in normal stand by mode, the phone line and any attached device will operate as normal.

***The dialer can be connected only to a TNV network (Telecommunication Network Voltage)***

## 2.6. Back-up battery installation

***WARNING** – Do not make any short connection of the battery terminals under any circumstance!*

- Straighten and smooth the cables under the control panel and tighten the control panel's screws. (Be sure that the panel is not crooked.)
- Remove the covering folio from the adhesive tape inside the battery compartment (see fig. 5),
- Slide the black wire connector that is inside the battery compartment over the black terminal of the battery (minus),
- Place the battery into the battery compartment so that the Black terminal is inside, and the battery is fixed to the adhesive tape.
- **Do not yet connect the red wire to the Red terminal**

***Note:** The control panel normally charges the battery. The battery can provide over 12 hours of power to the control panel if there is a failure of the AC power. Before the battery is discharged completely, the control panel will trigger a technical alarm and the battery will be electronically disconnected to avoid any damage. When the AC power is reconnected, the battery will automatically recharge.*

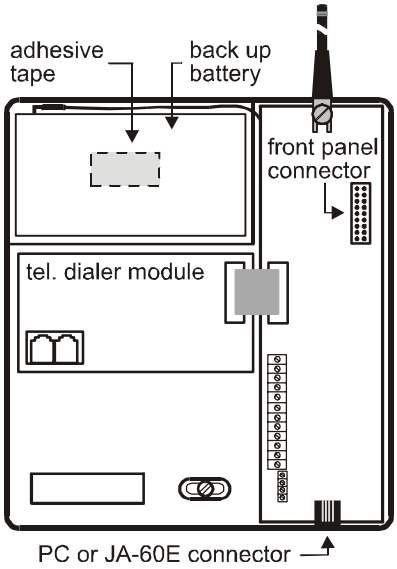



**Fig.5**

## 2.7. Powering of the control panel

- Connect the Red wire connector over the Red terminal of the battery (positive)
- Reconnect the cable from the front panel to the main board inside the rear housing.
- Reattach the front panel by placing the top side of the front panel over the top of the back panel and then push the bottom side against the wall (the tab will click).
- Plug in the AC adapter to the wall socket.
- The control panel's LED display will display "**P**", confirming that the system is in the programming mode (for system setting, enrollment of detectors and testing).

***Note**: if "P" is not displayed at this moment, the control panel is not currently in the factory default setting. Perform Factory default reset. (See section 11).*

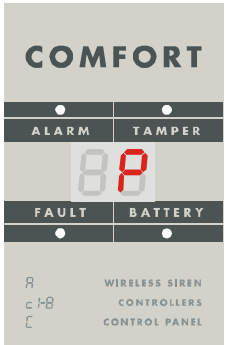


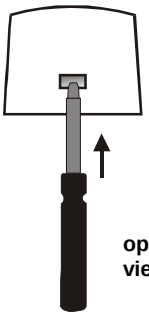

**Fig.6**

# 3. Installation of detectors

Do not install detectors near larger metal objects (this could obstruct radio communication). When choosing the location of the detectors, keep in consideration that a detector's batteries have to be replaced from time to time (approximately once a year). There is a description of the basic installation of the JA-60N ( magnetic door detector), and the JA60P (motion detector), below. If you also install other items (smoke detector, gas detector, remote keypad, wireless siren etc.), see manuals provided with each particular item.

## 3.1. JA-60N - magnetic door detector installation

The JA-60N detects the opening and closing of a door or a window. It also has inputs for external sensors (see section 7.2.). Each detector is equipped with a magnet (movement of the magnet triggers an internal sensor in the detector). We recommend to locate the detector unit on the wall or the frame of the door or window, with the magnet on the moving part of the door or window.



**opening of door detector (bottom view)**

**Fig.7**

- Open the detector's cover by pressing the internal pawl – see fig. 7
- Install the detector to the desired location using the two provided screws.
- Be sure that the antenna is vertical (pointing up or down)
- Attach the magnet, using the provided screws, to the moving part of the door or window, and attach its cover. The gap between the detector and magnet should not be wider than 5mm when the door is closed (see fig. 8)
- **Warning**: neither the detector nor the magnet should be fixed directly to a metal surface. If there is no other choice, an insulating pad (plastic, wood etc.) 5mm thick or more should be used under the detector and the magnet.

- Use DIP switch no. 1 to select if the reaction of the system to the door opening should be instant or delayed (main entrance door). Switch no. 2 must stay in the OFF position. See fig. 8.
- check that all 3 terminals in the detector are connected together with short connecting loops.
- install other JA-60N magnetic detectors the same way.
- **Be sure to leave all JA-60N detectors uncovered and without batteries installed**.

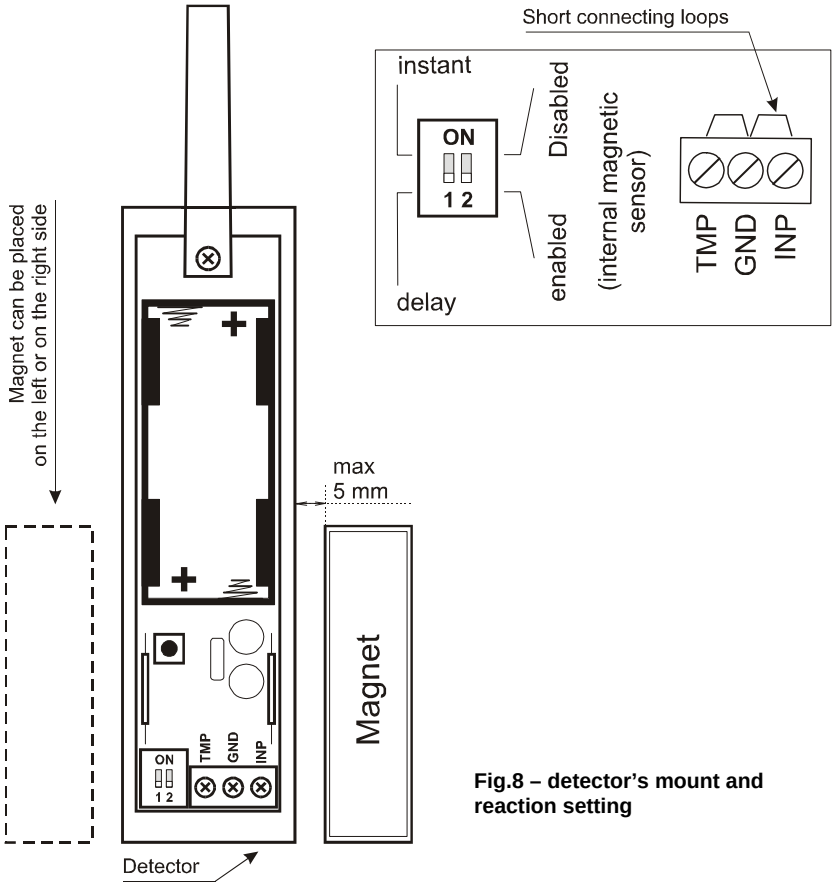



**Fig.8 – detector's mount and reaction setting**

## 3.2. JA-60P - motion detector installation

By using the provided bracket, the JA-60P detector can be installed on the wall or in a corner. The recommended installation height is from 2 to 2.5 meters above the floor. The detector's coverage area is up to 12 meters and it has a detection angle of 120° (see fig. 11). Do not place the detector close to any heating/cooling vents or near any other object that often changes temperature. The JA-60P should not be placed near any item that generates a strong electromagnetic signal (transmitters, electronic regulators etc.). Avoid locations that have intense air circulation.

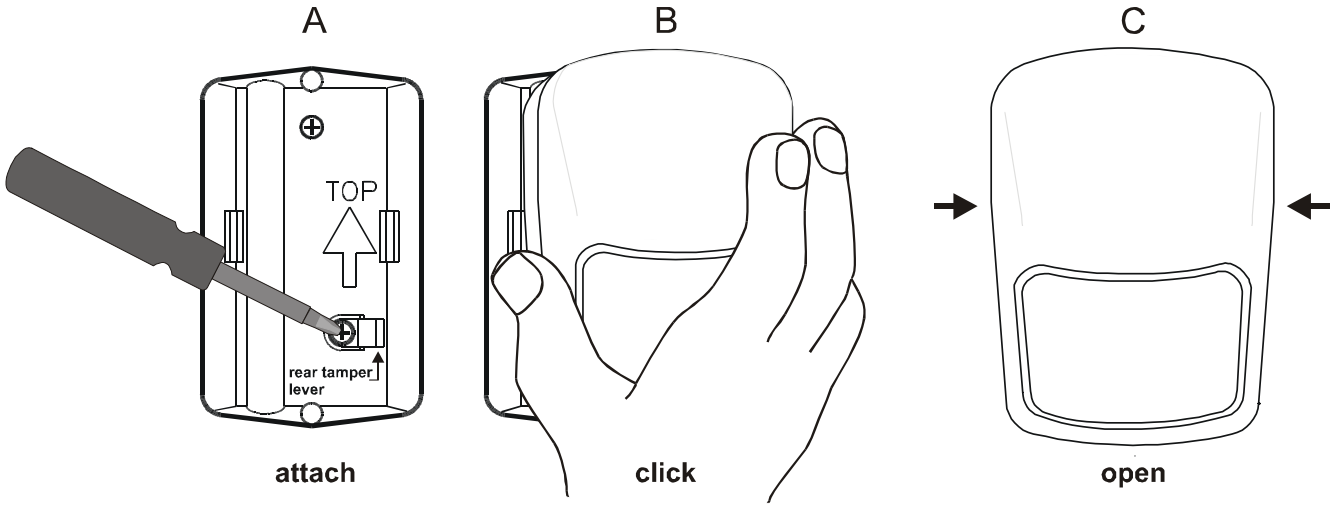


Fig. 9

**A.** Attach the bracket with the two provided screws, being sure that the arrow inside the bracket is pointing up. We recommend to install one screw in the pre-punched hole on the lever of the tampering sensor (see fig. 9. A). The second hole can be easily punched out from the pre-formed holes. Tighten the screws firmly, being sure that the bracket is not crooked.

**B.** Click on the complete detector (including cover). Both tabs must click. Check that the detector is firmly fixed.

**C.** Open the cover of the detector (press in on both sides 1/3rd from the top)

**D.** Select Instant or Delayed reaction of the system to the detector's triggering by using DIP SW 2 (see fig. 10)

**E.** Install other JA-60P motion detectors the same way, leaving them all **uncovered and without batteries**

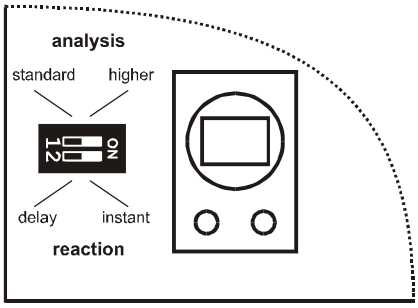



Fig.10

## 4. Enrollment of detectors and remote controls

At this moment, all detectors (and wireless keypads - if used) should be installed, without covers and without power (batteries). The control panel should be in the programming mode, displaying „P" (see part 2.7.). As a maximum, 16 detectors and 8 remote controls (including wireless keypads) can be used with the control panel. One JA-60A, wireless outdoor siren, can be enrolled as well. An additional JA-60 control panel can be enrolled as a subsystem (see part 18.1.). A wire operated keypad, JA-60E, can be simply plugged into the control panel's data connector.

### 4.1. Procedure for enrolling detectors and controllers:

a) The control panel must display "P" (programming mode – see 2.7).
b) Press key **1** to enter the enrolling mode.
c) A free detector position number (1 to 16) will be displayed, showing that the control panel is ready to accept an enrollment signal from a detector.
d) Install the two provided batteries into a detector and leave it uncovered.
e) The detector will generate an enrollment signal, and the control panel will "beep" to indicate reception of the signal (press F to select a louder "beep" sound) and the LED display will display the number of the next free position.
f) Step by step, install batteries into all of the installed detectors and wireless keypads (if used).
g) To enroll an RC-11 remote control (or RC-22 panic button), press and hold both its buttons for 3 seconds. The controllers and keypads are enrolled to special positions which are displayed as **c1** to **c8** on the LED display (the system automatically recognizes and differentiates the controllers from detectors)
h) To exit the enrolling mode, press the **N** key (a „**P**" will again be displayed on the LED display)

***Note:*** *if an item was not enrolled after its batteries were installed, it is because the control panel recognized its radio signal as a weak one. Items are only enrolled if their radio signal has a level which guarantees reliable communication. Check the detector's batteries and try to enroll the problematic sensor once more. If it is not accepted by the control panel, you should change the location of the item. All items should be located 1 m or more from the control panel.*

### 4.2. Enrollment or deletion of a detector or controller to/from a desired position (zone)

The control panel offers the next free position automatically in the enrolling mode. It is also possible to select a desired position manually and to change the position of an enrolled item or to delete it. The procedure is similar to the one in part 4.1:

- Press key **1** to enter the enrolling mode; a free position is displayed.
- **Use key 1 and 6 to scroll** (up and down) all control panel positions – 1 to 16 (detectors) – c1 to c8 (controllers & keypads) – A (wireless siren) – J (sub control panel JA-60). The LED display shows the position number while the Battery LED indicates if the position is occupied (if the Battery LED is illuminated, it indicates that the position is occupied).
- Detectors and keypads are automatically enrolled when their batteries are installed. A remote control is enrolled only after both of its buttons are simultaneously pressed and held for 3 seconds.

**Note***: The control panel will not allow you to enroll a detector as a controller, and vice versa (if you try to, the next suitable position will be used automatically).*

**To change the position** of an enrolled item is simple. **Enroll it to the new selected position** (the item will „move"). If you enroll an item to an occupied position, the former item will be deleted and the new enrollment is valid. Only one item (detector, controller etc.) can be stored to each position.

**Erase an enrolled item** the following way: in the enrolling mode **select** the corresponding **position** and then **press and hold key 2**. If you press and hold key 3, all enrolled controllers (remote controls and keypads) will be erased. Pressing and holding key 4 will erase all enrolled items (detectors, controllers, siren and the sub system). A long beep will acknowledge successful erasing.

# 5. Testing of detectors and controllers

The control panel should be in the programming mode for testing – (LED display will show „P“ )(see part 8. how to enter programming mode). If the control panel will not indicate a detector’s triggering during testing, it means that this detector was not enrolled (see note in part 4.1.).

## 5.1. JA-60N magnetic door detector testing

- Attach the detector’s cover (the detector will automatically enter a testing mode for 5 minutes)
- Opening and closing of the door/window will be confirmed by the detector’s LED.
- The control panel’s LED display will display the triggered detector’s number and it will make a beep - press F to select the loudness of the beep (0-I-II).
- 5 minutes after the cover was attached, the detector will enter its normal mode and its LED indicator will be switched off (battery energy saving function). Open and close the detector‘s cover to reset the testing mode for an additional 5 minutes, if needed.

## 5.2. JA-60P motion detector testing

- Attach the detector's cover and wait until the LED turns off. From this moment the detector will be in its testing mode for 5 minutes and each detected movement will be confirmed by the detector's LED.
- The control panel's LED display will display the triggered detector's number and it will make a beep - press F to select the loudness of the beep (0-I-II).
- Confirm that the detector covers the protected area as you expected (see diagram in fig. 11). If you need another coverage pattern (long corridor, pet zone), you can get an optional detector lens from your distributor.
- 5 minutes after the cover was attached, the detector will enter its normal mode and its LED indicator will be switched off (battery energy saving function). Open and close the detector's cover to reset the testing mode for an additional 5 minutes if needed.

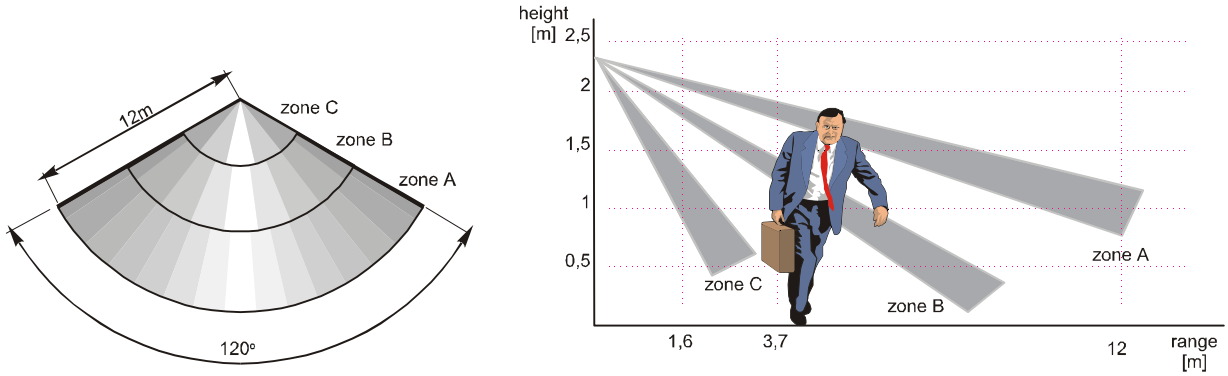



**fig. 11**

***Note**: the motion detector, in normal operating mode, conserves battery energy. It will not indicate triggering with its LED. It will also **block the movement sensor for a period of 5 minutes** after a movement is detected. This means that when users are in the protected area and they move frequently in front of the detector, it will transmit information about the movement to the control panel only once every 5 minutes. But when the users leave the area, the detector will be ready for instant detection 5 minutes after the last triggering. This system significantly prolongs the life time of the batteries.*

***To change the period**, for which the sensor is blocked after triggering from 5 min. to 1 min., press and hold the detector’s tamper switch when you install the batteries into it. This mode is suitable when you prefer more frequent transmissions of the signal. However, the life time of the batteries will usually be shorter, depending on how frequently the detector is triggered.*

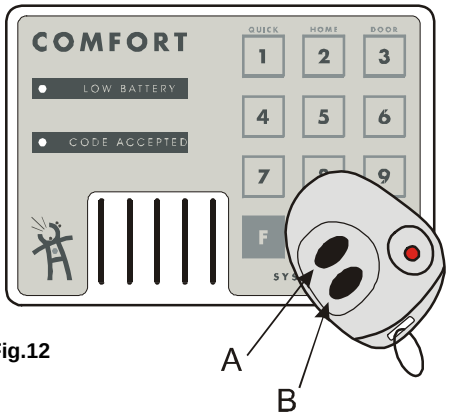



**Fig.12**

## 5.3. Remote control and keypad testing

- Press any button on the remote control (panic button) or enter a valid code on the wireless keypad (1234 factory default setting)
- The control panel’s LED display will display the controller’s number (c1 to c8) and it will beep - press F to select the loudness of the beep (0-I-II).
- This procedure allows you to test the remote control’s working range
- The wire operated keypad, JA-60E, has identical functions as the control panel’s keypad.

## 5.4. Recording a detector's location

After successfully testing all detectors, we recommend that you record the location of the sensors directly on the control panel (area under the LED display). A suitable marker for this is provided. If you need to erase your record, use a tissue dipped in rubbing alcohol.

You can also record the location of the detectors on the user instruction card, and in the Comlink software as well. (See software instructions)

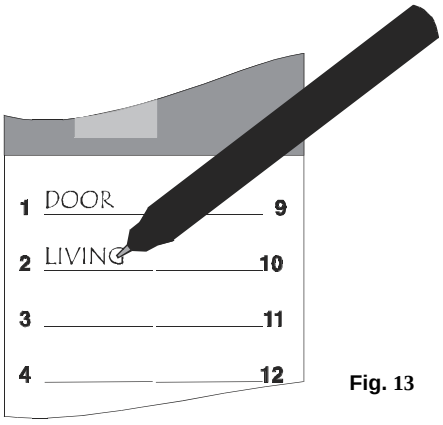



**Fig. 13**

# 6. Finishing of the installation

- Check that all detectors and other items have their covers attached.
- If the control panel has a built in telephone dialer, record your voice message and program the desired telephone numbers (see part 9).
- We recommend to set the date and time in the control panel (see part 8.21.); The control panel stores all events to an events list in its internal memory, including the date and time of the event. The details from the memory can be viewed any time in the future via a connected PC and Comlink software. The PC can also be used for convenient setting of the control panel.
- The system has a factory default setting, which allows you to use it without any other additional programming. If you want to customize the control panel setting, see part 8.
- Change the system Service Code to protect against unauthorized access to the programming mode (see part 8).
- **Exit the programming** mode by pressing the **N** key. The control panel will then enter the disarm mode. See the user instruction card for information on how to operate the system.
- If you have troubles with your system, see the Trouble shooting table in part 17.

***Note**: during testing and normal operation you should be aware of the following function: if four alarms are triggered from the same detector during the arming period, the detector will be bypassed automatically for the rest of the arming period. This feature prevents unlimited number of alarms (and possible conflict with your neighbors!) when for example improperly closed doors inside the house are repeatedly moved by the wind. Such a bypass of problematic detector is reset with the disarming of the system.*

## This is the end of the basic installation procedure.

## 6.1. Specifications:

| | |
|---|---|
| *control panel power* | *15V~, 0.2A, 50Hz (adapter SELV)* |
| *back up battery* | *12V, 1,3Ah* |
| *back up power output* | *13.8V, max. 50mA (permanent load), max. 1A (10 minutes)* |
| *number of zones (detectors)* | *16* |
| *number of controllers* | *max. 8* |
| *events memory* | *127 latest events incl. date and time information* |
| *built in siren* | *116dB* |
| *working frequency* | *433.92 MHz (optional)* |
| *RF approved according* | *EN 300 220* |
| *complies with* | *EN 50131-1, 50131-6* |
| *telephone dialer** | *voice message to 4 numbers* |
| | *numeric message to a Pager* |
| | *digital communication to a monitoring station* |
| *approved according** | *TBR21* |
| *electrical safety and EMC* | *EN 41003 (EN 60065), ETS 360683* |
| *working environment* | *indoor use, -10 to +40°C* |

* only for control panels equipped with the telephone dialer module

***Notes for JA-60X dialer use in European countries:***

*Equipment is listed under the name of product:* ***Wireless alarm system JA-60 "Comfort"***

*Equipment is designed to work with networks according to TBR 21 and tested according to EG 201 121 V1.1.3, Jan. 2000 including Advisory Notes for following countries:* ***Germany, Norway, Switzerland***

*Equipment was not tested according to advisory additional notes for:* ***Greece, Portugal and Spain***

*Equipment may have interworking difficulties with the local networks requiring current limitation as in* ***France***

***Italy's*** *legislation requires that use of SDR is subject to license.*

* can be connected to analogue interfaces TBR 21/1998, EG 201 121 V1.13/2000, AS/ACIF S002/2001 (Australia)

Hereby, Jablotron Ltd., declares that this JA-60 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. Original of the conformity assessment can be found at the web page www.jablotron.cz, section Technical support.

***Note:** Dispose of batteries safely depending on the type of the batteries and local regulation. Although this product does not contain any harmful materials we suggest you to return the product to the dealer or directly to the producer after usage.*

# 7. Wiring of external devices

In addition to using wireless items, which are part of the JA-60 system, hard wired devices can be wired to the system. The JA-60 control panel (JA-60K) and the JA-60N detector are both equipped with terminals for wiring.

## 7.1. Terminals in the control panel

There are terminals in the JA-60K for use when wiring in external devices:

**TMP** terminals used for connecting a tamper switch of an external device. This input must be equipped with end of line 2.2 kOhm resistor. If the line resistance changes in ±30 % or more, the control panel concludes that the tamper is broken.

**PGX** is an output (opened collector of a switching transistor to GND, max. 12V, 100mA). The function of this output is determined by the setting of parameter 23x in the programming mode (see 8.6). The control panel also wirelessly transmits the PGX signal and unit UC-216 can be used as a remote output of this signal (see 19.).

**PGY** is an output (opened collector of a switching transistor to GND, max. 12V, 100mA). The function of this output is determined by the setting of parameter 24x in the programming mode (see 8.6). The control panel also wirelessly transmits the PGY signal and unit UC-216 can be used as a remote output of this signal (see 19).

**C** is a common contact of the alarm output relay, max. load 60V / 1A,. The relay is turned on during any alarm of the control panel.

**NC** is a normally closed contact of the alarm output relay.

**NO** is a normally open contact of the alarm output relay.

**GND** is a common ground terminal of the power output (-).

**SIR** is an external siren output. In the normal mode, it has a +U voltage. In the alarm mode it has a GND potential. Connect an ordinary external siren to +U and SIR terminals (max. load 1A). A back up siren charging input should be connected to the GND and the SIR terminals (during an alarm, the charging will temporarily halt).

**+U** is a back up +13.8V power output. The permanent load should not be higher than 50mA. A short time consumption from this output can be up to 1A (max. 10 minutes). This output is fused and supervised by the control panel. If it is overloaded, a control panel failure will be indicated (fault C).

**AC** a pair of terminals to connect the AC adapter DE-12-15 cable (15 VAC) – arbitrary polarity

**1234** four small sized terminals of the digital bus – to wire JA-60E keypad when used (the same number terminals in the control panel and in the keypad should be connected)

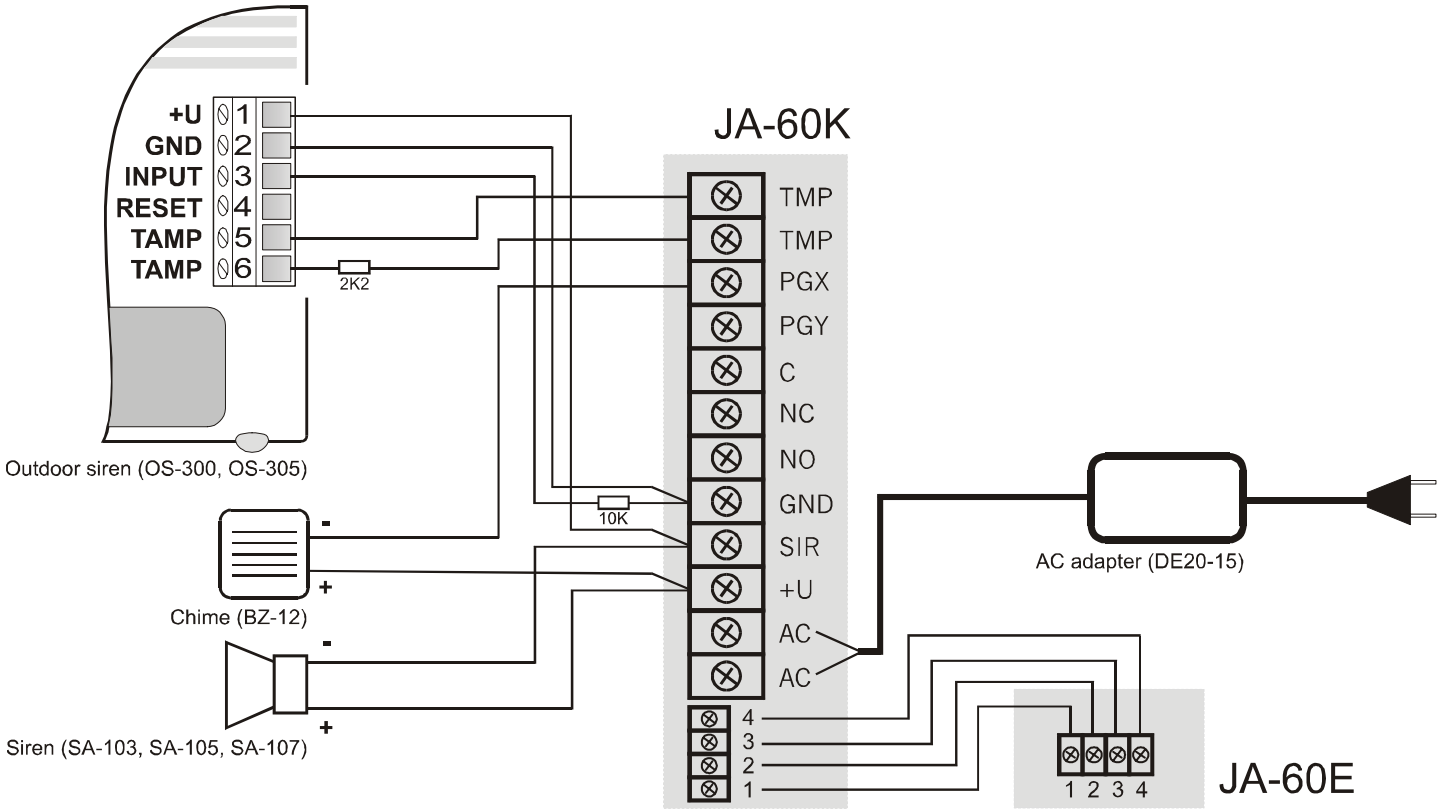



**Fig.14**

## 7.2. Use of external sensors with the JA-60N

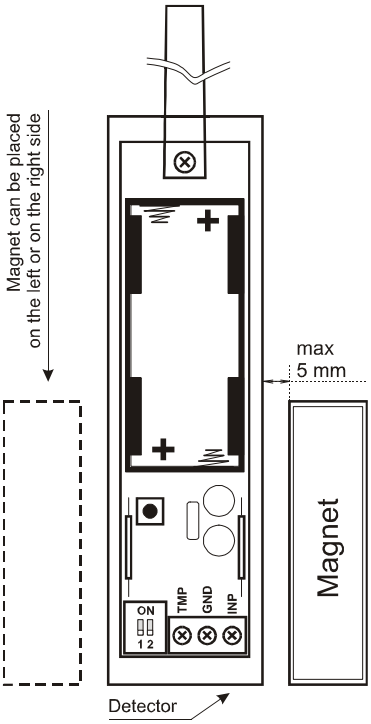



Fig.15

The JA-60N detector can be used to wire external sensors which have contacts on their outputs. For example, it can be used to protect multiple doors or windows (see fig. 16). The built in magnetic sensor of the JA-60N can also be disabled (DIP switch number 2 to position ON) and then the JA-60N works only as an interface for external sensors. Two input loops (TAMP & INP terminals) are activated when disconnected from the GND terminal.

**INP** – when this input is triggered (disconnected from GND), the JA-60N will send the same information as if the built in magnetic sensor was triggered. Reaction of the system can be selected with DIP switch number 1 (ON= instant or 1= delayed).

**TAMP** – when this input is triggered (disconnected from GND), the unit will send the same information as if the built in tamper sensor was triggered.

**Balanced loops** – the inputs INP & TAMP can also work as balanced loop inputs for higher security of connected cables. If you install an End Of Line resistor 10k in the end of the loop (INP or TAMP), the JA-60N will automatically recognize this situation and from this moment it will react to any change of the resistance (changes ±30% or more will trigger the input).

***Note**: if either the INP or TAMP terminal is not used, it must be connected to the GND terminal. The procedure to enroll the JA-60N with external sensors is identical as described in section 4.1. If you change the DIP switch's setting, the system will accept the new setting after the detector's cover is closed.*

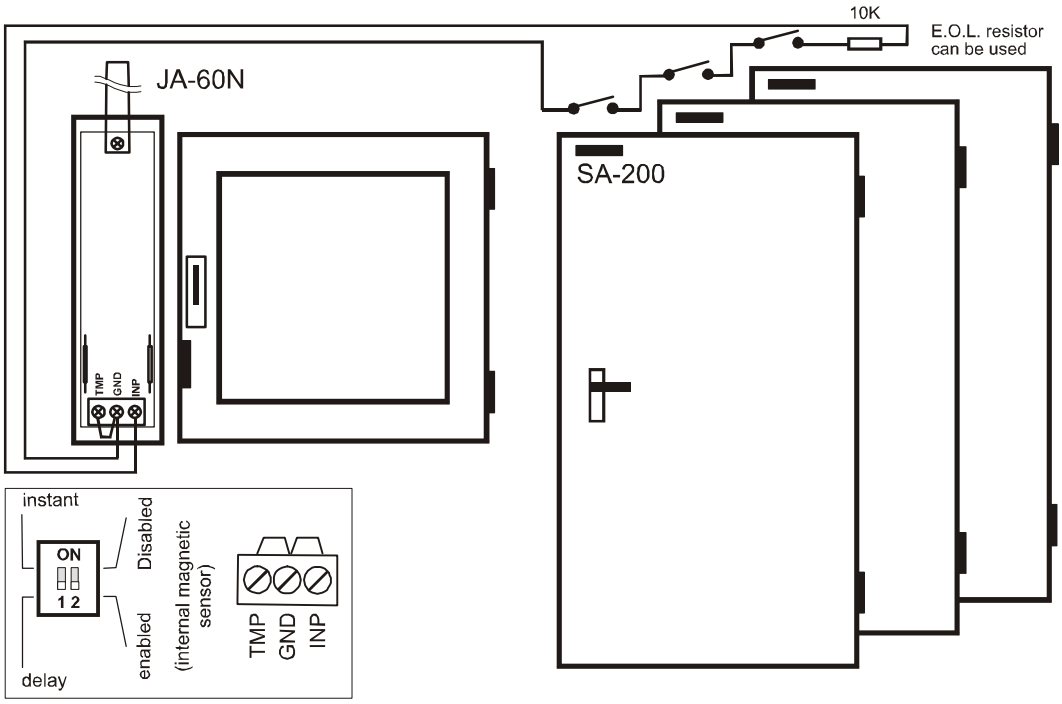



Fig.16

# 8. Control panel programming

Functions of the system can be customized. The most convenient programming method is via a connected PC using the Comlink software (see 14). Programming can also be performed by entering programming sequences from the system keypad while in the programming mode:

- Enter the programming mode (entering ***F 0 SC*** - SC = Service Code, factory default SC=6060), indicated by a „P“ on the display. This can only be done while the panel is disarmed. In this mode no alarm can be triggered. Detectors and other accessories can be enrolled, the system parameters can be set up and the system can be tested.
- The parameters of the control panel can be set by entering programming sequences from the keypad. Any unfinished programming sequence can be terminated by pressing the **N** key.
- **To exit the programming mode, press the N** key („P“ will turn off). If any fault is indicated when you try to exit the programming mode, the control panel will inform you about the problem (see programming sequence 39x for more details).

**List of control panel programmable parameters**

| Function | sequence | options | factory d. | note |
|---|---|---|---|---|
| **Enrolling of detectors and controllers** | **1** | **1**& **6** scrolling, hold 2 to erase position, 3 all controllers, 4 to erase all items | **-** | |
| **Exit delay** | **20x** | **x** = 1 to 9 (x 10sec.) | **30sec.** | |
| **Entrance delay** | **21x** | **x** = 1 to 9 (x 10sec.) | **30sec.** | |
| **Alarm duration** | **22x** | **x** = 1 to 8 (min.), for x=0 it will be 10 sec., for x=9 15min. | **4min.** | |
| **Function of PgX output** | **23x** | **x** = 0 to 8 (0-Chime, 1-Fire, 2-Arm, 3-Panic, 4-Alarm, 5-Door, 6-Home, 7-NO AC, 8-Phone | **Chime** | |
| **Function of PgY output** | **24x** | **x** = 0 to 8 (0-Chime, 1-Fire, 2-Arm, 3-Panic, 4-Alarm, 5-Door, 6-Home, 7-NO AC, 8-Phone | **Arm** | |
| **Voice message & phone numbers: editable in the user mode** | **25x** | **251 = YES 250 = NO** | **NO** | |
| **Radio signal jamming regular testing** | **26x** | **261 = YES 260 = NO** | **NO** | |
| **Regular communication check enabled** | **27x** | **271 = YES 270 = NO** | **NO** | |
| **RESET enabled** | **28x** | **281 = YES 280 = NO** | **YES** | |
| **Control panel teaching to a UC-2xx, subsystem,...** | **299** | **will send enrolling signal** | **-** | |
| **No code requested (effects F1, F2, F3, F4, F8 & F9)** | **30x** | **301 = YES 300 = NO** | **YES** | |
| **Partial (Home) arming enabled (F2)** | **31x** | **311 = YES 310 = NO** | **YES** | |
| **Siren alarm enabled** | **32x** | **321 = YES 320 = NO** | **YES** | |
| **Exit delay audible indication enabled** | **33x** | **331 = YES 330 = NO** | **YES** | |
| **Partial arming exit delay audible indication** | **34x** | **341 = YES 340 = NO** | **NO** | |
| **Entrance delay audible indication enabled** | **35x** | **351 = YES 350 = NO** | **YES** | |
| **Arming & disarming chirp sound enabled** | **36x** | **361 = YES 360 = NO** | **NO** | |
| **Siren in Disarm & Partial arming enabled** | **37x** | **371 = YES 370 = NO** | **YES** | |
| **Wireless siren alarm enabled** | **38x** | **381 = YES 380 = NO** | **YES** | |
| **Indication of system problems when arming** | **39x** | **391 = YES 390 = NO** | **NO** | |
| **Split control panel (A, B & C sections)** | **690x** | **6901 = YES 6900 = N0** | NO | |
| **Addressing of wireless detectors to sections** | **61 nns** | **nn**– zone n., **s**- section | 1-10 A | only when split |
| **Addressing of user codes to sections** | **62 nns** | **nn**– code n., **s**- section | all A | only when split |
| **Addressing of wireless controllers to sections** | **63 nns** | **nn**– controller n., **s**- section | all A | only when split |
| **Automatic arming/disarming setting** | **64nahhm m** | **n**- 0-9, **a**-action #, **hh**-hours, **mm**-min. | all off | |
| **New Service Code setting** | **5 nSC nSC** | **nSC = new Service Code** (must be entered twice) | **6060** | |
| **User Mode entering** | **6999** | **Switching to the User mode** | - | |
| **Real time and date setting** | **4 hh mm DD MM YY** | **00 00 01 01 00** | | |

## 8.1. Testing of the system *when the LED display displays **„P“***

In the programming mode (indicated by a „P“) no alarm can be triggered. The control panel will confirm receiving any signal from an enrolled detector or another JA-60 wireless item. It will make a beep - press F to select the loudness of the beep (0-I-II) and the LED display will show which signal was received. Some detectors (JA-60P, JA-60N etc.) have an extra testing mode, which is usually activated for 5 minutes after the detector's cover is attached (see manuals of the particular detectors).

Just as in the programming mode, the signals from all enrolled items are confirmed in the user mode (confirmed by a "U"). The user mode is accessible with the Master code and the supervisor of the system can use this mode to replace batteries in items or for system testing. To open the user mode enter F 0 MC (= Master Code) when the control panel is disarmed.

## 8.2. Enrollment (teaching) of wireless items *enter:* **1**

As a maximum 16 detectors and 8 controllers (remote controls & keypads) can be enrolled to the control panel. A wireless siren and an additional JA-6x control panel (subsystem) can be enrolled as well.

- **press key 1** (while „P“ is displayed) to enter the enrolling mode. The control panel will display the next free position to enroll a detector.
- **Use key 1 and 6 to scroll** (up and down) all control panel positions – 1 to 16 (detectors) – c1 to c8 (controllers & keypads) – A (wireless siren) – J (sub control panel JA-60, 65). The display shows the position number while the Battery LED indicates if the position is occupied (If the Battery LED is illuminated, it indicates that position is occupied).
- Detectors and keypads are automatically enrolled when their power is switched on (batteries are installed). A remote control is enrolled only after both of its buttons are simultaneously pressed and held for 3 seconds. A subsystem control panel will enroll after sequence 299 is entered while it is in its programming mode. The system will not allow enrollment of an item into a non-corresponding position (a detector can not be enrolled into a controller position etc.). If you try to enroll an item into an incorrect position, the control panel will automatically select a suitable position.
- **Control panel confirms enrollment** with a „beep“ (press F to select a louder “beep” sound). The LED display will show the number of the enrolled item for 2 seconds and then it will display the number of the next free position.
- **To change the position** of an enrolled item is simple. **Enroll it to the new selected position** (the item will „move“). If you enroll an item to an occupied position, the former item will be deleted and only the new enrollment is valid. Only one item (detector, controller etc.) can be stored to each position.
- **Erase an enrolled item** the following way: in the enrolling mode select the corresponding position and then press and hold key 2 for two seconds. The item will be erased (confirmed with a long beep). If you press and hold key 3, all enrolled controllers (remote controls and keypads) will be erased. Pressing and holding key 4 will erase all enrolled items (detectors, controllers, siren and the sub system).
- **The JA-60A wireless siren will generate an enrollment signal** when its power is switched on (it will enroll to position A). If you need to enroll a siren which is already powered and it is not possible to easily switch off its power, you can enroll it the following way: enter the enrolling mode and then enter the 6 digit siren production code (printed in the siren’s manual). The control panel will “request” the siren to send its enrollment signal. The siren will send the signal only if it has no current communication with any other control panel (This protects you from enrolling your neighbor’s siren). Enrollment is completed about five seconds after the code is entered.

***Note:*** *if an item was not enrolled after its batteries were installed, it is because the control panel recognized its radio signal as a weak one. Items are only enrolled if their radio signal has a level which guarantees reliable communication. Check the detector’s batteries and try to enroll the problematic sensor once more. If it is not accepted by the control panel, you should change the location of the item. All items should be located 1 m or more from the control panel.*

## 8.3. Exit delay sequence: **2 0 x**

To change the duration of the exit delay enter

**20x** (where **x** represents time in seconds x10). The delay can be selected from 10 to 90 seconds.

*Example: to select an Exit delay duration of 20 seconds, enter 202*

Factory default setting is 30 seconds

## 8.4. Entrance delay *sequence:* **2 1 x**

To change duration of the entrance delay enter:

**21x** (where **x** represents time in seconds x10). The delay can be selected from 10 to 90 seconds.

Example: To select entrance delay duration of 40 seconds, enter 214

Factory default setting: 30 seconds

## 8.5. Alarm duration *sequence:* **2 2 x**

The alarm duration can be selected from 1 to 8 or 15 minutes (or 10 seconds) entering **22x** (where **x** represents time in minutes, for x=0 the duration will be 10 seconds, for x=9 the duration will be 15 minutes).

*Example: to select an alarm duration of 5 minutes, enter 225*

Factory default setting is 4 minutes

## 8.6. PgX and PgY outputs function *sequences:* **2 3 x & 2 4 x**

The control panel outputs PgX and PgY can have different functions, depending on parameter **x** in the corresponding sequence:

**2 3 x** – determines triggering of **PgX**

**2 4 x** – determines triggering of **PgY**

**where x** represents the following functions (non split system):

- **0 Chime** – triggered during the entrance delay (pre-alarm output)
- **1 Fire** – triggered by a fire alarm (by a smoke or a gas detector)
- **2 Arm** – activated when the control panel is armed (complete & partial arming)
- **3 Panic** – activated when a silent panic alarm is triggered
- **4 Alarm** – triggered by any audible alarm (except panic alarm)
- **5 Door** – activated for 5sec. after F3 entering (electric door lock opening)
- **6 Home** – activated when the control panel is partially armed (Home arming)
- **7 No AC** – triggered by an AC power failure
- **8 Phone** – output can be operated remotely by phone or by SMS (if this feature is supported by installed communicator) or locally from the keypad by F81 (ON) and F80 (OFF).

Table for split system:

| x | 23x (PgX) | 24x (PgY) |
|---|---|---|
| 0 | Alarm A | Alarm A |
| 1 | Alarm B | Alarm B |
| 2 | Chime A | Chime A |
| 3 | Chime B | Chime B |
| 4 | Arm A | Arm B |
| 5 | Door A | Door B |
| 6 | Panic A | Panic B |
| 7 | FIRE | NoAC |
| 8 | Phone | Phone |

*Example for non split system: the PgX will work as a Panic output when 233 is entered, PgY as Door output when 245 is entered.*

Factory default setting: PgX=Chime, PgY=Arm

*Note: the control panel also wirelessly transmits the PgX and PgY signals. Wireless output modules UC-216 and UC-222 can be used to receive the signals. The function of the UC module output relays is determined by the 23x and 24x setting.*

## 8.7. User recorded message and phone numbers editing in the user mode *sequence:* **2 5 x**

The User mode, which is accessible with F 0 “Master Code”, is for battery replacement and system testing. This setting enables the user to change the voice message and telephone numbers of the built in dialer. If the changes are enabled, then programming sequences 7=tel. numbers programming, 8=voice message recording and 89=dialer testing are accessible in the **U**ser mode (see description from 9.1. to 9.3.).

options:

**2 5 1** changes **enabled**

**2 5 0** changes **disabled** (no programming in the **U**ser mode)

Factory default setting: changes disabled

## 8.8. Radio signal jamming testing *sequence:* **2 6 x**

When this function is enabled, the control panel will indicate trouble if the working band is jammed for more than 30 seconds. Jamming will trigger an alarm when the control panel is armed.

options:

**2 6 1** testing **enabled**

**2 6 0** testing **disabled**

Factory default setting: disabled

*Note: in some locations the system can be repeatedly jammed for some period of time (near radar, TV station etc.). In these cases the JA-60 system can work without any problems because all important data is repeated, but the jamming test should not be enabled. The level of the signals and interference can be observed using the Comlink software (see 14.)*

## 8.9. Regular communication checking *sequence:* **2 7 x**

The control panel will check communication regularly with all enrolled items (detectors, keypads, siren etc.) when this function is enabled. If communication is lost with any item, the control panel will indicate the fault of this item (when armed it will also trigger an alarm).

options:

**2 7 1** checking **enabled**

**2 7 0** checking **disabled**

Factory default setting: checking disabled

*Note: in some locations with a strong radio interference (near radar, TV station etc.) the communication can be jammed periodically. The control panel can detect such a strong interference as a temporary loss of communication with an item. Even in this case, the JA-60 system is usually able to work without any problems, because all important data is repeated, but the communication check should not be used.*

## 8.10. Reset enabled *sequence:* **2 8 x**

The factory default reset (see 11.) can be disabled. This way no unauthorized future programming of the control panel will be possible.

options:

**2 8 1** reset **enabled**

**2 8 0** reset **disabled**

Factory default setting: reset enabled

*Note: if the Master or Service code is forgotten when the reset is disabled, the reset of the control panel will be possible only by the manufacturer.*

## 8.11. Enrollment of the control panel to a UC-216, 222, JA-60K etc. *sequence:* **2 9 9**

The control panel can send wireless data to output modules UC-216, UC-222 and UC-260 (see 19.) It can also work as a subsystem of another JA-60 or JA-65 control panel.

Enter the enrolling mode of the **UC receiving device** and then enter **299** and the control panel will generate the enrollment signal.
If you want to enroll a **subsystem** to your control panel, enter the enrolling mode on the MASTER control panel (8.2.) and then enter sequence 299 in the programming mode of the sub control panel.

## 8.12 No code requested for F1, F2, F3, F4, F8 & F9 *sequence:* **3 0 x**

If this parameter is enabled, no code is requested for functions F1, F2, F3, F4, F8 and F9. When this parameter is disabled, these functions can be used only when followed by a code (Master or User) – see the following table:

| function / setting | 300 | 301 |
|---|---|---|
| arming | „code“ | F 1 |
| partial arming | F 2 „code“ | F 2 |
| door opening | F 3 „code“ | F 3 |
| memory reading | F 4 „code“ | F 4 |
| appliance control | F 8 „code“ 0<br>F 8 „code“ 1 | F 80<br>F 81 |
| message listening | F 9 „code“ | F 9 |

„code“ = Master or User

Factory default setting: no code requested

*Note: this feature is also selectable on the JA-60D wireless keypad and it is independent from the control panel setting.*

## 8.13. Partial arming with F2 (not split system) *sequence:* **3 1 x**

In partial arming, the control panel reacts only to detectors addressed to section A (see 8.22) and it ignores the triggering of detectors in section B or C (except smoke and gas detectors). Partial arming can be disabled with this sequence.

options:

**3 1 1** partial arming **enabled**

**3 1 0** partial arming **disabled**

Factory default setting: partial arming enabled

## 8.14. Siren alarm *sequence:* **3 2 x**

The built in siren is active when any alarm is triggered (except silent Panic alarm). The alarm indication can be disabled with this parameter.

options:

**3 2 1** siren **enabled**

**3 2 0** siren **disabled**

Factory default setting: siren enabled

## 8.15. Exit delay audible indication *sequence:* **3 3 x**

The exit delay can be indicated by the „beeping“ of the control panel (for the last five seconds, the beeping is faster). The audible indication can be disabled with this setting.

options:

**3 3 1** indication **enabled**

**3 3 0** indication **disabled**

Factory default setting: indication enabled

## 8.16. Partial arming exit delay audible indication *sequence:* **3 4 x**

Partial arming with F2 provides an exit delay for delayed reaction detectors in positions 1 to 10. The exit delay for partial (split) arming can be indicated by the „beeping“ of the control panel (for the last five seconds the beeping is faster).

options:

**3 4 1** indication **enabled**

**3 4 0** indication **disabled**

Factory default setting: indication disabled

*Note: when this indication is disabled, the confirmation of partial arming and disarming will automatically be silent, regardless of the 36x setting.*

## 8.17. Entrance delay audible indication *sequence:* **3 5 x**

The entrance delay can be indicated by a rapid „beeping“ of the control panel. This indication can be disabled with this setting.

options:

**3 5 1** indication **enabled**

**3 5 0** indication **disabled**

Factory default setting: indication enabled

## 8.18. Arming and disarming chirp sounds *sequence:* **3 6 x**

The control panel confirms arming with a beep and disarming with two beeps (3 beeps after disarming indicates user information on the LED display). 4 beeps indicates that a bypass is activated or a component is not ready. These sounds can also be generated more loudly with the built in siren.

options:

**3 6 1** siren chirps **enabled**

**3 6 0** siren chirps **disabled**

Factory default setting: siren chirps disabled

*Note: setting of chirp sounds is valid even if the siren is disabled for alarms with parameter 320. Partial (split) arming is always silent, if sequence 340 is selected. Chirp sounds can also be generated with the JA-60A wireless siren (self-contained setting in the wireless siren).*

## 8.19. Siren alarm in Disarm & Split arming or disarming *sequence:* **3 7 x**

The built in siren can be disabled for alarms during the Disarm or Partial & Split control panel arming (while somebody is indoors). If the in siren is completely disabled for alarms with parameter 320, this setting is moot.

options:

**3 7 1** alarm **enabled**

**3 7 0** alarm **disabled**

Factory default setting: enabled

## 8.20. Wireless siren alarm *sequence:* **3 8 x**

The wireless siren alarm function can be disabled with this parameter. This setting will have no influence on the outdoor siren chirp sounds function if enabled in the siren.

options:

**3 8 1** siren **enabled**

**3 8 0** siren **disabled**

Factory default setting: siren enabled

## 8.21. Indication of system problems when arming *sequence:* **3 9 x**

The system regularly checks the conditions of all items (detectors, keypads etc.). This setting ensures that the user will be warned with 4 rapid beeps after arming, if any component of the system is not ready for arming. Cause of the problem (for example permanently triggered detector, lost communication etc.) will remain displayed on the control panel. If the user ignores this warning, the system will arm after the exit delay, then an alarm will be triggered and finally the problematic item will be bypassed for this arming period. After disarming in such a mode, three beeps will be generated as well.
When the indication is not selected, the problematic item will be bypassed when arming with neither warning nor alarm.
If a permanently activated detector is deactivated during arming (for example your main door is not closed), the bypass of this detector will be canceled automatically and the detector will be ready to trigger an alarm after it is activated (if you close the door after the system is armed).

options:

**3 9 1** warning **enabled**

**3 9 0** warning **disabled**

Factory default setting: warning disabled

## 8.22. Control panel splitting *sequence:* **690 x**

The control panel can be split in to 2 independent sections A and B, with a shared common area C. This way the system can be operated by two independent user groups. In fact the system in this mode works like two independent systems. If the system is split to the sections with this setting, it is possible to address detectors, user codes and remote controls to the above sections (see. 8.22, 23 and 24.).

options:

**6 9 0 0** **no splitting** (partial arming available in this mode)

**6 9 0 1** **splitting to sections A, B and common C** (C is armed only when both A and B are armed)

Factory default setting: no splitting

## 8.23. Addressing of detectors to sections *sequence:* **61 nns**

If the control panel is split (see 8.21.), the detectors can be addressed to sections by entering:

**61 nns**

where: **nn** = wireless detector zone number: from 01 to 16
**s** = section: 1 = A, 2 = B, 3 = C (common section - it is armed only when both A and B are armed). If the control panel is not split, and s=2 (or s=3) is selected, this detector will be bypassed while partial arming.

*Example: to address detector zone number 3 to section A enter: 61 031*

Factory default setting: detectors 1 - 10 are addressed to A, detectors 11 - 16 are addressed to B

## 8.24. Addressing of the user codes to sections *sequence:* **62 nns**

If the control panel is split (see 8.21.), the user codes can be addressed to sections A or B by entering:

**62 nns**

where: **nn** = user code number: from 01 to 14
**s** =section: 1 = A, 2 = B

Notes:

- If the control panel is not split, this setting has no effect.
- Master code (MC) can not be addressed. If the system is split, the use of MC will arm all sections if no section is armed or it will disarm all sections if any is armed. If no code arming is not used (sequence 300) and the system is spilt then entering F1 MC will effect only section A and entering F2 MC will effect only section B.

*Example: to address user code number 4 to section A enter: 62 04 1*

Factory default setting: all user codes (01 - 14) are addressed to section A

## 8.25. Addressing of wireless controllers to sections *sequence:* **63 nns**

If the control panel is split (see 8.21.), the wireless controllers (RC-11, RC-22 and JA-60D) can be addressed to A or B section by entering:

**63 nns**

where: **nn** = number of the enrolled controller from 01 to 08 (c1 to c8)
**s** = section: 1 = A, 2 = B

Notes:

- If the control panel is not split, this setting has no effect
- For the JA-60F keypad this setting has no effect (its user codes are determined by 62nns setting)

*Example: to address controller number 5 to section A enter: 63 051*

Factory default setting: all wireless controllers are addressed to section A

## 8.26. Automatic arming / disarming setting *sequence:* **64 nahhmm**

The control panel can automatically arm and disarm for a requested period of a day. Up to ten instructions (time & action) can be programmed in the period of one day by entering:

**64 nahhmm**

where: **n** = instruction number from 0 to 9
**a** = action (see the actions' table)
**hh** = hours (from 00 to 23)
**mm** = minutes (from 00 to 59)

**actions' table**

| a | no splitting | split system |
|---|---|---|
| 0 | no action | no action |
| 1 | arm all | arm all |
| 2 | disarm | disarm all |
| 3 | partial arming | arm A |
| 4 | partial arming | arm B |
| 5 | disarm | disarm A |
| 6 | disarm | disarm B |

Notes:

- If any automatic action is selected, it will be preformed everyday in the programmed time, following the internal control panel clock (see 8.26.).
- The automatic arming and disarming can be overridden manually anytime (by an user code or a remote control)
- If the control panel is in the requested arming mode before the action time, performance of the programmed action will not change the arming

*Example: to program an automatic complete arming of the system at 21:15 everyday enter: 64 0 1 21 15*

Factory default setting: all instructions are set for no action

## 8.27. Real time and date setting *sequence:* **4 hh mm dd MM YY**

The control panel has a built in real time clock. All events are stored to the event memory including the time of the event. The clock should be set after the installation is complete.

Time Setting:

**4 hh mm dd MM YY**

where **hh = hours** (24 hr. cycle)
**mm = minutes**
**dd = day**
**MM = month**
**RR = year**

*Example: on Jun. 30 2005 at 17:15 enter: 4 17 15 30 06 05*

After the control panel is powered, its internal clock's default setting is: 00 00 01 01 00

*Note: detail control panel event history can be viewed with a connected PC using Comlink software.*

## 8.28. New service code setting *sequence:* **5 nSC nSC**

The Service Code can be used to enter the programming mode. A new Service Code must be entered twice in the sequence to avoid an error.

To change the code enter:

**5 nSC nSC**

where nSC is your new Service Code (four digits)

*Example: to change service code to 1276 enter: 5 1276 1276*

Factory default setting: service code is 6060

## 8.29. User Mode entering *Sequence:* **6 9 9 9**

This sequence is used to switch from the Service Mode to the User Mode, where you can set zones´ bypass (see User´s manual). You can exit the User Mode by pressing the "N" button. The bypassed zones will remain active after the leaving the User Mode.

# 9. Voice & Pager messages setting

A control panel equipped with a telephone dialer can automatically send a voice message(s) and a code to a Pager. The most convenient programming of the dialer is via a connected PC using the Comlink software (see 14). Programming can also be performed by entering programming sequences from the system keypad while in the control panel programming mode:

- Enter the programming mode (entering ***F 0 SC*** - SC = Service Code, factory default SC=6060), indicated by a „P" on the display. This can only be done while the panel is disarmed.
- The parameters of the dialer can be set by entering programming sequences from the keypad. Any unfinished programming sequence can be terminated by pressing the **N** key.
- **To exit the programming mode, press the N** key („P" will turn off). If any fault is indicated when you try to exit the programming mode, the control panel will inform you about the problem (see 8.20.).
- Telephone numbers and the voice message can also be set up in the User Mode when enabled (see 8.6.2.)

**List of the voice & Pager programmable parameters**

| Function | sequence | options | factory d. | note |
|---|---|---|---|---|
| **Dialing method** | **90x** | **901 = tone 900 = pulse** | **tone** | |
| **Triggering of the dialer with a Panic alarm** | **91x** | **911 = YES 910 = NO** | **911** | |
| **Triggering of the dialer with an Intruder alarm** | **92x** | **921 = YES 920 = NO** | **921** | |
| **Triggering of the dialer with a Fire alarm** | **93x** | **931 = YES 930 = NO** | **931** | |
| **Triggering of the dialer with a Tamper alarm** | **94x** | **941 = YES 940 = NO** | **941** | |
| **Triggering of the dialer with a Technical alarm** | **95x** | **951 = YES 950 = NO** | **951** | |
| **Telephone line checking enabled** | **99x** | **991 = YES 990 = NO** | **NO** | |
| **Store telephone numbers for voice message** | **7xx..x F y** | **xx...x** = tel. number, **y** = memory 1 to 4, pause = F0 | 1:<br>2:<br>3:<br>4:<br>5: | |
| **Pager dialing programming** | **7x.xF9z..zF5** | **x..x** = provider tel. number **z..z** = pager number + message | | |
| **Erase telephone number** | **7F0Fy** | **y** = memory 1 to 5, entering **7F0F0 erases all** | | |
| **Record voice message** | **8 0** (hold 0 and talk to control panel) | | 2 messages - see 9.2. | |

## 9.1. Telephone numbers entering *sequence:* **7xxx....xxFy**

**Store telephone numbers for voice message entering:**

**7 xx... xx F y**

where **xx...xx** = telephone number
**y** = memory number from 1 to 4

A telephone number can have a maximum of 16 digits. A **pause** can be entered with **F0** (pause can not be entered as the first digit).

*Example: to store tel. number 483 123456 to memory no. 2 enter: 7 483 F0 123456 F2*

*Note: enter a pause (F0) after the last digit of a number which is calling a mobile phone. This way the number will be called only once and the dialer will not check the line signals (some mobile phone systems do not generate standard telephone line signals).*

**When activated, the dialer will** disengage all other devices hooked up to the phone line (telephone, fax..). It will then, one by one, call and play the user recorded message, for all programmed numbers. If the dialer makes a successful connection to a programmed number, it will not call that number again. If the number is busy, the dialer will make 3 more attempts to call it.
Empty tel. number memories are skipped. If all memories are empty, the dialer is completely disabled.
**To delete a telephone number** enter:

**7 F0 F*y***

where ***y*** is a memory number from 1 to 4

entering **7 F0 F0** will erase all tel. numbers, including the Pager number

**Store number to call Pager** (to memory number 5) entering:

**7 xx..x F9 zzz....zz F5**

where **xx...x** = provider prefix
**F9** = separator (it will wait for a provider's signal and will switch to DTMF if not used)
**zzz...zz** = pager number and numeric message and other specific codes (language selectors, end of message etc.) if requested by the Paging provider
**F5** = to store the number to memory no. 5

As a maximum 32 digits can be stored to memory # 5. Special characters can be entered with the following Fx codes:

| | |
|---|---|
| *pause* | **F0** |
| * | **F7** |
| # | **F8** |

*Example: enter 7 0611 F9 1 1234 555 F80 F5 if the provider prefix is 0611, the Pager number 1234 and the message 555. Number 1 after F9 is a language selector, code F80 represents #0 = end of message.*

*Note: some Paging providers also offer an option to send the message as an **SMS to the GSM network**. Consult your Paging provider for details if you have trouble sending a message to the Pager.*

**To delete the Pager number** enter:

**7 F0 F5**

If the memory number 5 is empty, no message will be sent to a Pager.

Factory default setting: all memories from 1 to 5 are empty.

## 9.2. Voice message recording *sequence:* **8 0**

Press shortly key **8** then press key **0** and hold it pressed while talking into the control panel's front grid (max. 20 seconds). After releasing the 0 key, the message will play back. The message is stored in non-volatile memory and can be changed when ever you want to by repeating the above steps. Make the message clear and brief. The dialer repeats the message to each called number for 40 seconds.

It is possible to **split the voice message into two different messages** (10 seconds each). Depending on the setting in section 9.5., a particular message will be sent under different situations.

If you want **to record two messages**: press shortly key **8** and then press key **1** and hold it pressed while recording the first message. To record the second message press shortly key **8** then press key **2** and hold it pressed while talking into the control panel's front grid.

## 9.3. Telephone dialer testing *sequence:* **8 9**

Enter **89** and the dialer will call the programmed numbers once. You will hear the telephone line signals from the built in speaker during the test (if the dialer is triggered by an alarm in normal operation, it will call silently). Testing can be terminated with the **N** key.

If two different voice messages were recorded, then use sequence 88 to test the sending of the first message and 89 to test the sending of the second message.

## 9.4. Dialing method *sequence:* **9 0 x**

Enter:

**9 0 1** for **tone** dialing

**9 0 0** for **pulse** dialing (this option is blocked for some countries)

*Note: this dialing method setting is also valid for Monitoring station communications as well as remote PC access*

Factory default: tone dialing

## 9.5. Telephone dialer triggering* *sequences:* **9 y x**

With sequences 91x to 95x you can select which alarms will trigger the telephone dialer to call and which ones will not.

Enter:

**9 y x**

where

| *y* | *alarm* |
|---|---|
| **1** | Panic – silent |
| **2** | Intruder |
| **3** | Fire |
| **4** | Tampering |
| **5** | Technical trouble |

| x | reaction |
|---|---|
| **0** | not to call |
| **1** | voice message & Pager code |
| **2** | voice message only |
| **3** | Pager code only |

*Example: if the dialer should not call when the system is tampered with, enter 940*

Factory default setting: all alarms will trigger the dialer (it means 911, 921, 931, 941 & 951)

If two different voice messages were recorded (see 9.2.), then parameter **x** specifies which message will be sent.

| x | reaction |
|---|---|
| **0** | not to call |
| **1** | send message #1 and Pager code |
| **2** | send message #2 only |
| **3** | Send Pager code only |

## 9.6. Telephone line checking *sequence:* **9 9 x**

If this function is enabled, the dialer will check regularly if the telephone line is ready to make a phone call. If the line is not ready for more than 15 minutes, the control panel will indicate a telephone line failure (failure L). Not working telephone line or a phone conversation or Internet connection longer than 15 minutes can cause a fault.

options:

**9 9 1** checking **enabled**

**9 9 0** checking **disabled**

*Note: this setting is also valid when the dialer is used for Monitoring station communications as well as remote PC access*

Factory default setting: checking disabled

# 10. To enable a remote computer to dial in

When the user or installer wants to dial in to the installation from their JA-60U modem equipped computer or JA-60E keypad (see 15.), the following parameters should be programmed in the control panel's telephone dialer.
The most convenient programming of the dialer is via a connected PC using the Comlink software (see 14). Programming can also be performed by entering programming sequences from the system keypad while in the control panel programming mode:

- Enter the programming mode (entering ***F 0 SC*** - SC = Service Code, factory default SC=6060), indicated by a „P" on the display. This can only be done while the panel is disarmed.
- The programming sequences can be entered from the keypad. Any unfinished sequence can be terminated by **N** key.
- **To exit the programming mode, press the N** key („P" will turn off).

Dialing in parameters

| Function | sequence | options | factory d. | note |
|---|---|---|---|---|
| Incoming call reaction | **0 5 x** | 0=disabled, 1= second call, 2-6 = after ring No. 2 - No.6 | disabled | |
| Remote access code (8 digits) | **0 7** xxxxxxxx | any 8 digits code | 00000000 | |

## 10.1. Reaction to an incoming call *sequence: 05*

This sequence sets how the communicator will react to incoming calls on the telephone line. This setting is important for access from a remote computer.

**0 5 x**

**x** can be **0** - never answer
**1** - answer after second call = after 1 or 2 rings are detected, there must be a pause of 10 - 45 seconds. The dialer will then answer on the very first ring of the second call. This setting can be used to bypass an answering or facsimile machine connected to the same line. This "Second Call" feature is supported by the Comlink software
**2, 3, 4, 5, 6** - answer after 2nd, 3rd, 4th, 5th or 6th ring

*Note: Remote access connection can also be enabled by the alarm system user (regardless of the above setting) by entering code 89 during service or user mode, when a remote call rings. If you use another telephone set on the same telephone line, it should be switched to a tone dial mode.*

Factory setting: 0 = never answer

## 10.2. Remote access code setting *sequence: 07*

In order to access the panel from a remote computer or JA-60E keypad, it is necessary to authorize the access with an 8-digit access code. This code is compared with the one programmed in the control panel. If the remote computer tries to access the panel with an other code, the connection will be terminated immediately and a wrong code alarm will triggered on the control panel. Store your access code to the control panels by entering:

**0 7 xxxxxxxx**

**x x . . . . . x** - any 8 digits access code

Factory setting: 00000000

# 11. Factory default RESET

If you forgot the control panel codes or you have a control panel which is currently not under factory default setting, perform the following procedure:

- disconnect the AC adapter, back up battery and wait 30 seconds.
- reconnect the back up battery and close the control panel cover
- press and hold the 6 key on the control panel while reconnecting the AC adapter.
- when "–" is displayed, enter 060 (within 10 seconds)
- reset is confirmed with "P" (panel is in programming mode)

*Note: this procedure resets the factory default settings (see table 8). The Master code will be 1234, Service code 6060 and all user codes, detectors, controllers and other enrolled items will be forgotten. All telephone numbers will be erased. The reset will not erase event memory and information about the reset will be recorded there.*
*Warning: if the Master code is forgotten when reset is disabled (with sequence 280 - see part 8.9.), the control panel reset will be possible only by the manufacturer.*

# 12. Monitoring station communication setting

This part of the manual is intended only for the use of specialists involved in monitoring. We recommend to use a computer equipped with Comlink program for complete setting of the monitoring station communication (see 14). Changes of the setting can also be performed manually using the JA-60E or built in keypad of the JA-60 system:

- Enter the programming mode (entering ***F 0 SC*** - SC = Service Code, factory default SC=6060), indicated by a „P“ on the display.
- **To exit the programming mode, press the N** key („P“ will turn off).

Monitoring station communication parameters

| Sequence | Description | | | Factory default setting | |
|---|---|---|---|---|---|
| **0 001 xx**<br>to<br>**0 198 xx** | Reporting codes table (see part 13)<br>where: **x**= **0** – **9**, **F0 = $A_h$, F1 = $B_h$ , F2 = $C_h$, F3 = $D_h$, F4 = $E_h$, F5 = $F_h$**<br>if **00** is set, the event is not reported | | | 00 | For all events |
| **0 2 xxxx** | Account code (4 digits, for 3/1 and 3/2 formats the structure is 0xxx)<br>**x** = **0** – **9** (hexadecimal codes can be used too - see above) | | | 0000 | |
| **0 3 xy** | Protocol **x**:<br>**0** = Ademco Slow<br>**1** = Ademco Fast<br>**2** = Telemax<br>**3** = Franklin<br>**4** = Radionics 2300 | **5** = Radionics 1400<br>**6** = DTMF 2300<br>**7** = Surgard<br>**8** = Ademco Express<br>**9** = Contact ID | Format y:<br>**0** = 3/1 (xxx R)<br>**1** = 3/2 (xxx rc)<br>**2** = 4/1/1 (xxxx Rn)<br>**3** = 4/2 (xxxx rc) | 90 | Contact ID |
| **0 4 x** | Re-dialing pause, **x**= **1 – 9** (x 10 min.) | | | 1 | 10 minutes |
| **0 6 xx..xFy** | Phone numbers **xx...x** to memory **y** (1 and 2), pause = F0 | | | | erased |
| **0 9 6060** | Communicator reset to factory default settings | | | | - |

**Dialing method** ( tone / pulse) and **telephone line checking** has a common setting with the voice & Pager message setting - see part 9.4. and 9.6.

***Notes:***

*Some of the protocols are not standardized and some manufacturers of Monitoring Station receivers use different parameters in some of their protocols. Therefore Jablotron cannot guarantee full compatibility with all Monitoring Station receivers.*

*If the connection with the Monitoring Station is not available, the events are queued in the communicator's memory and are transmitted in one burst as soon as the connection is established. All events are reported to the Monitoring Station in the same order as they happened.*

*Once communication has started, it can not be interrupted unless the control panel is switched to the programming or to the user mode. For example, if the user causes a false alarm and then cancels it, both events are sent to Monitoring Station.*

*Events occurring while the JA-60 control panel is in a programming or user mode are reported to the Monitoring Station after the closing of these modes. (They are stored in the memory and reported together with reporting codes describing the change of operation modes.)*

*When the dialer is activated, the communication to the monitoring station has the highest priority (voice and Pager messages are sent later with lower priority). A User or Installer can interrupt the digital dialer communication by entering the User mode or Programming mode. Reset of the control panel has no influence to the digital communicator's settings (it is reported to the Monitoring station as an event).*

*The RESET of the digital communicator itself (sequence 0 9 6060), the change of the Monitoring Station's telephone numbers, the change of an account number code or the change of a format setting will erase all the reporting codes queued in the communicator's memory. However the events remain stored in the control panel's internal memory.*

## 12.1. Reporting code setting *sequences: 00 and 01*

These sequences can be used to program the reporting codes for all possible events. Depending on the used protocol and format, different amounts of data should be entered. The complete report codes programming table is shown in section 13. The setting sequence structure is as follows:

**0 x x x r c**

**xxx** = event number (from 001 to 198)

**rc** = report code (two digits). For 3/1 and 4/1/1 formats only the first digit of the reporting code is used (R). Codes should be entered in a hexadecimal format, with numbers higher than 9 beginning with the F key: ***$A_h$ = F0 $B_h$ = F1 $C_h$ = F2 $D_h$ = F3 $E_h$ = F4 $F_h$ = F5***

If the reporting code 00 is programmed, the event will not be reported to the Monitoring Station.

Factory setting: 00 for all events

***Notes:***

- *Abbreviation "Rc" is used in the report codes programming table for the major events group. Only the first digit of this group of codes is transmitted when formats 3/1 or 4/1/1 are used. Other formats use both digits of the "Rc" and "rc" report codes.*
- *The Contact ID (CID) is an automatic protocol. If you enter any report code other than zero for a major event (Rc), all events of this type will be transmitted automatically including all details regarding the event source. Internal structure of the CID protocol is shown in the part 13.1. This protocol provides the most in-depth data for the monitoring station and its use is recommended by Jablotron.*
- *The Surgard protocol has 4/2 structure plus one more digit which is generated automatically (see 12.3.)*
- *The pulse formats are not capable to report zone numbers above 15. For this reason events in zone 16 or in a subsystem are reported to the Monitoring Station as events in zone 10. This means that from the point of view of the monitoring station zone 10 also covers zone 16 and the subsystem if used. This problem does not exist in the CID protocol.*
- *If the control panel is split and only one section is armed, then a partial arming report code is sent. If all sections are armed, a complete arming report code is sent. If the system was completely armed and only one section is disarmed, will be sent the partial arming report code.*
- *If the system is arming while there is a bypass, partial arming will be reported to the CMS (also stored to the internal memory)*

## 12.2. Account code setting *sequence: 02*

This sequence is used for the alarm system identification by a Monitoring Station. The sequence structure is as follows:

**02 x x x x**

**xxxx** – account code ( x are numbers from 0 to 9 or hexadecimals).

When using only three-digit codes (formats 3/1 and 3/2) enter a zero in the first position. The communicator will then ignore it (example - 0123)

*Note: Changing of the account code erases the internal communicator's memory of non reported events and sends a „Reset" reporting code (051) to the Monitoring Station.*

Factory setting: 0000

## 12.3 Protocol and Format setting *sequence: 03*

This sequence is used to select the communication protocol and format. Its structure is as follows:

**03 x y**

**x** - protocol (0 – 9, see table bellow)
**y** - format (0 - 3 see table on right)

**Protocols**

| x | Name | Hand-shake | Data | Kiss off | Speed | format |
|---|---|---|---|---|---|---|
| **0** | Ademco Slow *(Silent Knight)* | 1400Hz | 1900Hz | 1400Hz | 10bps | Next table |
| **1** | Ademco Fast | 1400Hz | 1900Hz | 1400Hz | 14bps | Next table |
| **2** | Telemax | 2100Hz | 1650Hz | 2100Hz | 10bps | Next table |
| **3** | Franklin | 2300Hz | 1800Hz | 2300Hz | 20bps | Next table |
| **4** | Radionics 2300 | 2300Hz | 1800Hz | 2300Hz | 40bps | Next table |
| **5** | Radionics 1400 | 1400Hz | 1900Hz | 1400Hz | 40bps | Next table |
| **6** | DTMF 2300 | 2300Hz | DTMF | 2300Hz | DTMF | Next table |
| **7** | Surgard* | 2300Hz | DTMF | 2300Hz | DTMF | 4/3 |
| **8** | Ademco express* | Dual tone | DTMF | 1400Hz | DTMF | 4ID/2 |
| **9** | Contact ID* | Dual tone | DTMF | 1400Hz | DTMF | CID |

* **fixed format**, "y" is arbitrary (0 is recommended)

**Formats**

| y | format | reports | structure |
|---|---|---|---|
| **0** | 3/1 | Major events only | xxx R |
| **1** | 3/2 | All events | xxx rc |
| **2** | 4/1/1 | Major events with autom. source identification | xxxx Rn |
| **3** | 4/2 | All events | xxxx rc |

**xxxx** = account number
**R** = major event code (first digit counts only)
**rc** = detailed event code (two digits)
**n** = source identification (generated automatically)

**Surgard** protocol has structure: **xxxx E rc,** where E is a group identifier (generated automatically)

| E | Event | Note |
|---|---|---|
| 1 | Fire | |
| 2 | Panic | |
| 3 | Alarm | General |
| 4 | Arming | Incl. Partial |
| 5 | Disarming | |
| 6 | Failure | Mains failure, RF jamming etc.. |
| 8 | Report | Enter/Exit service mode … |
| 9 | Restore | End of alarm, panic … |
| A | Test | 24 hour test |

*Notes:*

*1/ Some Monitoring Station receivers do not support all formats.*

*2/ Logic of the format marking - 4/2 means, that an account code has 4 digits and an event report code has 2 digits.*

*Changing of a format erases the internal communicator's memory of non reported events and sends a „Reset" reporting code (051) to the Monitoring Station.*

Factory setting: 90 (Contac ID)

## 12.4. Re-dialing pause setting *sequence: 04*

If a dialer is triggered it attempts to make a connection (altering the main and the backup telephone number). If it is not possible to make a connection after 8 attempts, a pause is inserted. After this pause the dialer dials again. If any event triggers the communicator during the pause, the pause ends immediately. The pause length can be set in a following way:

**0 4 x**

**x –** time multiplied by 10 minutes (from 1 to 9, example 3 = 30 minutes)

Factory setting: 1 = 10 min.

## 12.5. Phone number entering *sequence: 06*

Monitoring station modem phone numbers can be stored by entering the following sequence:

**0 6 x x .... x F y**

**xx...x** - Monitoring Station phone number (up to 16 digits)
**y** is 1 for main phone number memory
2 for back up phone number memory

**Pause** (3 sec.) can be inserted into the telephone number by entering **F0**. It is also possible to insert the ∗ tone by **F7** or the # tone by **F8** if requested for DTMF dialing.

*Example: number 02 123456 as main Monitoring Station number is entered with 06 02 F0 123456 F1.*

### Phone number erasing

**0 6 F 0 F y**

**y** is 1 to erase the main telephone number
2 to erase the back up telephone number

*Note: Changing of a phone number erases the internal communicator's memory of non reported events and sends a „Reset" reporting code (051) to the Monitoring Station.*

Factory setting: both numbers are erased

## 12.6. Digital communicator reset *sequence: 096060*

By entering this sequence the factory default settings of all parameters are restored. All phone numbers, reporting codes, account codes etc. are erased. This reset doesn't effect the voice dialer's settings. The reset sequence is:

**0 9 6060**

*Note: All communicator settings are normally stored in non-volatile memory and remain unchanged even after switching off the power supply.*

# 13. Monitoring station reporting codes table

A two digit reporting code **rc** (00 to FFh) can be set for every event. If 00 is programmed as a report code, that event will not be reported.

The major events group is marked with **Rc.** When formats 3/1 or 4/1/1 are used, only these major events are reported to the Monitoring Station. This makes it necessary to only program the **R** digits. The second digit does not count.

For Contact ID protocol, program code 11 for major events (**Rc**) which you want to report and the system will generate all details regarding the event automatically.

| N. | Event | *Code* |
|---|---|---|
| **001** | **Arming with remote control N.1** | **Rc** |
| 002 | Arming with remote control N.2 | rc |
| 003 | Arming with remote control N.3 | rc |
| 004 | Arming with remote control N.4 | rc |
| 005 | Arming with remote control N.5 | rc |
| 006 | Arming with remote control N.6 | rc |
| 007 | Arming with remote control N.7 | rc |
| 008 | Arming with remote control N.8 | rc |
| 009 | Arming with master code | rc |
| 010 | Arming with user code N.1 | rc |
| 011 | Arming with user code N.2 | rc |
| 012 | Arming with user code N.3 | rc |
| 013 | Arming with user code N.4 | rc |
| 014 | Arming with user code N.5 | rc |
| 015 | Arming with user code N.6 | rc |
| 016 | Arming with user code N.7 | rc |
| 017 | Arming with user code N.8 | rc |
| 018 | Arming with user code N.9 | rc |
| 019 | Arming with user code N.10 | rc |
| 020 | Arming with user code N.11 | rc |
| 021 | Arming with user code N.12 | rc |
| 022 | Arming with user code N.13 | rc |
| 023 | Arming with user code N.14 | rc |
| **024** | **Partial arming** | **Rc** |
| **025** | **Quick arming without code** | **Rc** |
| **026** | **Disarming with remote control N.1** | **Rc** |
| 027 | Disarming with remote control N.2 | rc |
| 028 | Disarming with remote control N.3 | rc |
| 029 | Disarming with remote control N.4 | rc |
| 030 | Disarming with remote control N.5 | rc |
| 031 | Disarming with remote control N.6 | rc |
| 032 | Disarming with remote control N.7 | rc |
| 033 | Disarming with remote control N.8 | rc |
| 034 | Disarming with master code | rc |
| 035 | Disarming with user code N.1 | rc |
| 036 | Disarming with user code N.2 | rc |
| 037 | Disarming with user code N.3 | rc |
| 038 | Disarming with user code N.4 | rc |
| 039 | Disarming with user code N.5 | rc |
| 040 | Disarming with user code N.6 | rc |
| 041 | Disarming with user code N.7 | rc |
| 042 | Disarming with user code N.8 | rc |
| 043 | Disarming with user code N.9 | rc |
| 044 | Disarming with user code N.10 | rc |
| 045 | Disarming with user code N.11 | rc |
| 046 | Disarming with user code N.12 | rc |
| 047 | Disarming with user code N.13 | rc |
| 048 | Disarming with user code N.14 | rc |
| **049** | **Entering of the programming mode** | **Rc** |
| **050** | **Exiting the programming mode** | **Rc** |
| **051** | **Communicator Reset** | **Rc** |
| **052** | **Initial AC powering** | **Rc** |
| **053** | **Alarm after initial AC powering** | **Rc** |
| **054** | **General battery trouble** | **Rc** |
| **055** | **General battery trouble end** | **Rc** |
| **056** | **Control panel battery trouble** | **Rc** |
| **057** | **Control panel battery trouble end** | **Rc** |
| **058** | **Zone alarm 1** | **Rc** |
| 059 | Zone alarm 2 | rc |
| 060 | Zone alarm 3 | rc |
| 061 | Zone alarm 4 | rc |
| 062 | Zone alarm 5 | rc |
| 063 | Zone alarm 6 | rc |
| 064 | Zone alarm 7 | rc |
| 065 | Zone alarm 8 | rc |
| 066 | Zone alarm 9 | rc |
| 067 | Zone alarm 10 | rc |
| 068 | Zone alarm 11 | rc |
| 069 | Zone alarm 12 | rc |
| 070 | Zone alarm 13 | rc |
| 071 | Zone alarm 14 | rc |
| 072 | Zone alarm 15 | rc |
| 073 | Zone alarm 16 | rc |
| **074** | **Wrong access code alarm** | **Rc** |
| **075** | **Zone tamper 1** | **Rc** |
| 076 | Zone tamper 2 | rc |
| 077 | Zone tamper 3 | rc |
| 078 | Zone tamper 4 | rc |
| 079 | Zone tamper 5 | rc |
| 080 | Zone tamper 6 | rc |
| 081 | Zone tamper 7 | rc |
| 082 | Zone tamper 8 | rc |
| 083 | Zone tamper 9 | rc |
| 084 | Zone tamper 10 | rc |
| 085 | Zone tamper 11 | rc |
| 086 | Zone tamper 12 | rc |
| 087 | Zone tamper 13 | rc |
| 088 | Zone tamper 14 | rc |
| 089 | Zone tamper 15 | rc |
| 090 | Zone tamper 16 | rc |
| 091 | Keypad tamper | rc |
| 092 | Control panel tamper | rc |
| 093 | Siren tamper | rc |
| **094** | **Zone fault 1** | **Rc** |
| 095 | Zone fault 2 | rc |
| 096 | Zone fault 3 | rc |
| 097 | Zone fault 4 | rc |
| 098 | Zone fault 5 | rc |
| 099 | Zone fault 6 | rc |
| 100 | Zone fault 7 | rc |
| 101 | Zone fault 8 | rc |
| 102 | Zone fault 9 | rc |
| 103 | Zone fault 10 | rc |
| 104 | Zone fault 11 | rc |
| 105 | Zone fault 12 | rc |
| 106 | Zone fault 13 | rc |
| 107 | Zone fault 14 | rc |
| 108 | Zone fault 15 | rc |
| 109 | Zone fault 16 | rc |
| 110 | Keypad fault | rc |
| 111 | Control panel fault | rc |
| 112 | Siren fault | rc |
| **113** | **Zone alarm end 1** | **Rc** |
| 114 | Zone alarm end 2 | rc |
| 115 | Zone alarm end 3 | rc |
| 116 | Zone alarm end 4 | rc |
| 117 | Zone alarm end 5 | rc |
| 118 | Zone alarm end 6 | rc |
| 119 | Zone alarm end 7 | rc |
| 120 | Zone alarm end 8 | rc |
| 121 | Zone alarm end 9 | rc |
| 122 | Zone alarm end 10 | rc |
| 123 | Zone alarm end 11 | rc |
| 124 | Zone alarm end 12 | rc |
| 125 | Zone alarm end 13 | rc |
| 126 | Zone alarm end 14 | rc |
| 127 | Zone alarm end 15 | rc |
| 128 | Zone alarm end 16 | rc |
| **129** | **Zone tamper end 1** | **Rc** |
| 130 | Zone tamper end 2 | rc |
| 131 | Zone tamper end 3 | rc |
| 132 | Zone tamper end 4 | rc |
| 133 | Zone tamper end 5 | rc |
| 134 | Zone tamper end 6 | rc |
| 135 | Zone tamper end 7 | rc |
| 136 | Zone tamper end 8 | rc |
| 137 | Zone tamper end 9 | rc |
| 138 | Zone tamper end 10 | rc |
| 139 | Zone tamper end 11 | rc |
| 140 | Zone tamper end 12 | rc |
| 141 | Zone tamper end 13 | rc |
| 142 | Zone tamper end 14 | rc |
| 143 | Zone tamper end 15 | rc |
| 144 | Zone tamper end 16 | rc |
| 145 | Keypad tamper end | rc |
| 146 | Control panel tamper end | rc |
| 147 | Siren tamper end | rc |
| **148** | **Zone fault end 1** | **Rc** |
| 149 | Zone fault end 2 | rc |
| 150 | Zone fault end 3 | rc |
| 151 | Zone fault end 4 | rc |
| 152 | Zone fault end 5 | rc |
| 153 | Zone fault end 6 | rc |
| 154 | Zone fault end 7 | rc |
| 155 | Zone fault end 8 | rc |
| 156 | Zone fault end 9 | rc |
| 157 | Zone fault end 10 | rc |
| 158 | Zone fault end 11 | rc |
| 159 | Zone fault end 12 | rc |
| 160 | Zone fault end 13 | rc |
| 161 | Zone fault end 14 | rc |
| 162 | Zone fault end 15 | rc |
| 163 | Zone fault end 16 | rc |
| 164 | Keypad fault end | rc |
| 165 | Control panel fault end | rc |
| 166 | Siren fault end | rc |
| **167** | **Telephone line trouble** | **Rc** |
| **168** | **Telephone line trouble end** | **Rc** |
| **169** | **Control panel failure** | **Rc** |
| **170** | **End of control panel failure** | **Rc** |
| **171** | **Periodic test (24 hr. from last com.)** | **Rc** |
| **172** | **AC failure (in 30 min. after failure)** | **Rc** |
| **173** | **AC failure end** | **Rc** |
| **174** | **RF jamming** | **Rc** |
| **175** | **Wrong code alarm end** | **Rc** |
| **176** | **RF jamming end** | **Rc** |
| **177** | **Panic alarm from remote control N.1** | **Rc** |
| 178 | Panic alarm from remote control N.2 | rc |
| 179 | Panic alarm from remote control N.3 | rc |
| 180 | Panic alarm from remote control N.4 | rc |
| 181 | Panic alarm from remote control N.5 | rc |
| 182 | Panic alarm from remote control N.6 | rc |
| 183 | Panic alarm from remote control N.7 | rc |
| 184 | Panic alarm from remote control N.8 | rc |
| 185 | Master code panic alarm | rc |
| 186 | User code panic alarm | rc |
| **187** | **Panic alarm end from remote contr. 1** | **Rc** |
| 188 | Panic alarm end from remote control N.2 | rc |
| 189 | Panic alarm end from remote control N.3 | rc |
| 190 | Panic alarm end from remote control N.4 | rc |
| 191 | Panic alarm end from remote control N.5 | rc |
| 192 | Panic alarm end from remote control N.6 | rc |
| 193 | Panic alarm end from remote control N.7 | rc |
| 194 | Panic alarm end from remote control N.8 | rc |
| 195 | Master code panic alarm end | rc |
| 196 | User code panic alarm end | rc |
| **197** | **Subsystem panic alarm** | **Rc** |
| **198** | **Subsystem panic alarm end** | **Rc** |

## 13.1. Internal structure of Contact ID protocol

The data in the CID protocol has following structure:

**XXXX 18 Q XYZ 01 CCC**

where XXXX is the account code of the installation, 18 is the code identification (identical for all events), Q is a number from 1 to 3, XYZ is the event number, 01 is the subsystem number, CCC event source details (see the table down the page).

| JA-60 event no. | Q XYZ | Event description | possible source in JA-60 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | C | S | c | A | J | L | d |
| 058 | 1 110 | Fire alarm | | ✔ | | | ✔ | | |
| 113 | 3 110 | Fire alarm end | | ✔ | | | ✔ | | |
| 177 | 1 120 | Panic alarm | ✔ | | ✔ | | | | ✔ |
| 058 | 1 120 | Panic alarm from a detector | | ✔ | | | | | |
| 197 | 1 120 | Panic alarm in the subsystem | | | | | ✔ | | |
| 187 | 3 120 | End of the panic alarm | ✔ | | ✔ | | | | ✔ |
| 113 | 3 120 | End of the panic alarm from a detector | | ✔ | | | | | |
| 198 | 3 120 | End of the subsystem panic alarm | | | | | ✔ | | |
| 058 | 1 130 | Intruder alarm in an instant zone | | ✔ | | | | | |
| 113 | 3 130 | End of the intruder alarm in an instant zone | | ✔ | | | | | |
| 058 | 1 134 | Intruder alarm in a delayed zone | | ✔ | | | | | |
| 113 | 3 134 | End of the intruder alarm in a delayed zone | | ✔ | | | | | |
| 075 | 1 137 | System tamper alarm | ✔ | | ✔ | ✔ | ✔ | | ✔ |
| 129 | 3 137 | All system tampers OK | ✔ | | ✔ | ✔ | ✔ | | ✔ |
| 074 | 1 138 | Wrong access code alarm | ✔ | | ✔ | | | ✔ | ✔ |
| 175 | 3 138 | End of a wrong access code alarm | ✔ | | ✔ | | | ✔ | ✔ |
| 053 | 1 140 | Alarm after powering of the control panel | ✔ | | | | | | |
| 075 | 1 144 | Detector tamper alarm | | ✔ | | | | | |
| 129 | 3 144 | All detector tampers OK | | ✔ | | | | | |
| 094 | 1 300 | Failure (blown fuse in control panel or other general failure) | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ |
| 052 | 3 300 | Control panel powering | ✔ | | | | | | |
| 148 | 3 300 | No failure in the system | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ |
| 172 | 1 301 | AC failure | ✔ | | | | | | |
| 173 | 3 301 | AC switched on | ✔ | | | | | | |
| 054 | 1 302 | Problem with power in an item | | | ✔ | ✔ | ✔ | | |
| 056 | 1 302 | Back up battery failure in the control panel | ✔ | | | | | | |
| 057 | 3 302 | End of the back up battery failure | ✔ | | | | | | |
| 055 | 3 302 | End of the problem with power in the item | | | ✔ | ✔ | ✔ | | |
| 051 | 1 305 | Reset | ✔ | | | | | ✔ | |
| 049 | 1 306 | Entering of programming or user mode | ✔ | | ✔ | | | | ✔ |
| 050 | 3 306 | End of programming or user mode | ✔ | | ✔ | | | | ✔ |
| 058 | 1 330 | Subsystem alarm | | | | | ✔ | | |
| 167 | 1 354 | Tel. line failure | | | | | | ✔ | |
| 169 | 1 354 | Failure of communication in the digital bus | | | | | | ✔ | |
| 168 | 3 354 | End of tel. line failure | | | | | | ✔ | |
| 170 | 3 354 | End of a communication failure in the digital bus | | | | | | ✔ | |
| 174 | 1 355 | RF jamming | ✔ | | | | | | |
| 176 | 3 355 | End of RF jamming | ✔ | | | | | | |
| 094 | 1 380 | Detector failure | | ✔ | | | | | |
| 148 | 3 380 | End of all detector failures | | ✔ | | | | | |
| 094 | 1 381 | Wireless item communication lost | | ✔ | ✔ | ✔ | ✔ | | |
| 148 | 3 381 | Wireless item communication reestablished | | ✔ | ✔ | ✔ | ✔ | | |
| 054 | 1 384 | Detector power problem | | ✔ | | | | | |
| 055 | 3 384 | End of the detector power problem | | ✔ | | | | | |
| 026 | 1 401 | Disarming | ✔ | | ✔ | | | | ✔ |
| 001 | 3 401 | Complete arming | ✔ | | ✔ | | | | ✔ |
| 024 | 3 402 | Partial (Home) arming | ✔ | | ✔ | | | | ✔ |
| 025 | 3 408 | No code arming | ✔ | | ✔ | | | | ✔ |
| 171 | 1 602 | Monitoring station communication testing (in 24 hr.) | | | | | | ✔ | |

Event sources specification in the Contact ID protocol:

| JA-60 source | mark | code CCC |
|---|---|---|
| Wireless sensor | **S** | 001 to 016 |
| Controller | **c** | 401 to 408 |
| User code | | 501 to514 |
| Control panel | **C** | 701 |
| Wireless siren | **A** | 711 |
| Sub control panel | **J** | 721 |
| Tel. Line | **L** | 731 |
| Digital bus | **D** | 741 |

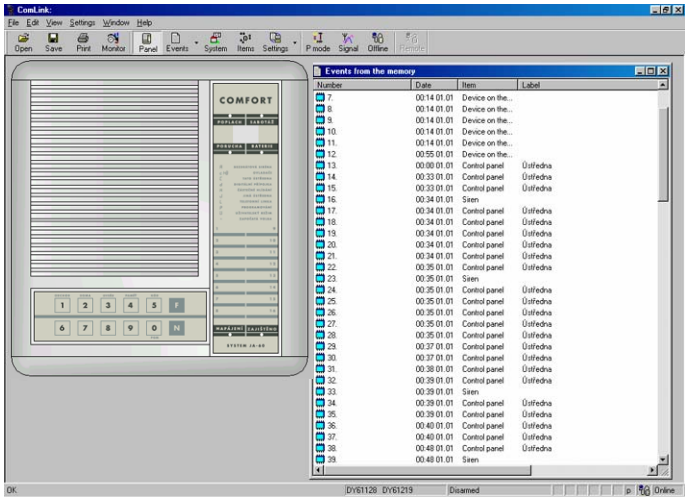
# 14. Personal Computer Interface with JA-60

The JA-60 system can be connected to a Personal Computer (PC) locally, using the PC-60A interface cable. It is also possible to dial into the system from a remote PC (or the JA-60E keypad) using the JA-60U modem (see 15). Comlink software is available for Windows system.

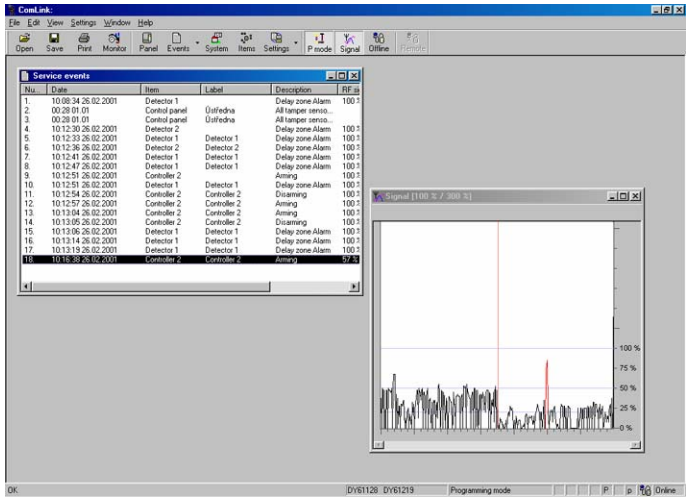
**User** can check and operate the JA-60 system easily via their PC, can read complete events memory with all details, can view the map of the installation (seeing topical triggering of the detectors) etc. However, the user can not change settings of the system.

**Installer** who has access rights can program the system, can check the communication quality of the items, can view the level of interference in the location etc. There is also a convenient tool to make a map of the installation, which includes a library of all JA-60 components.

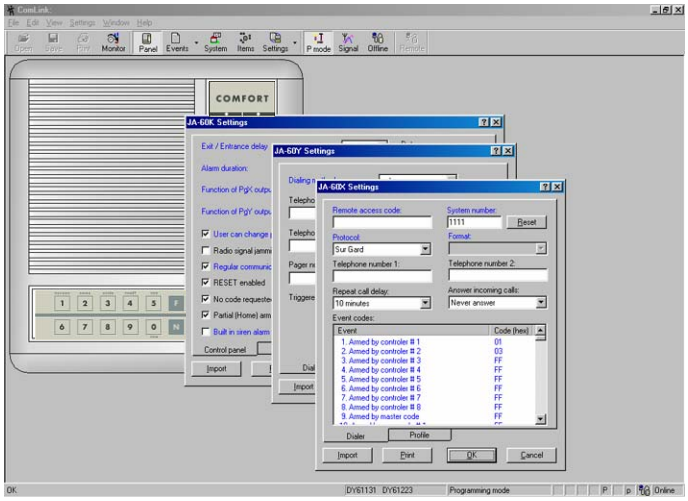
Depending on your access rights, the Comlink software will allow you to open the corresponding screens (see following examples). There is a clear help in the Comlink program.



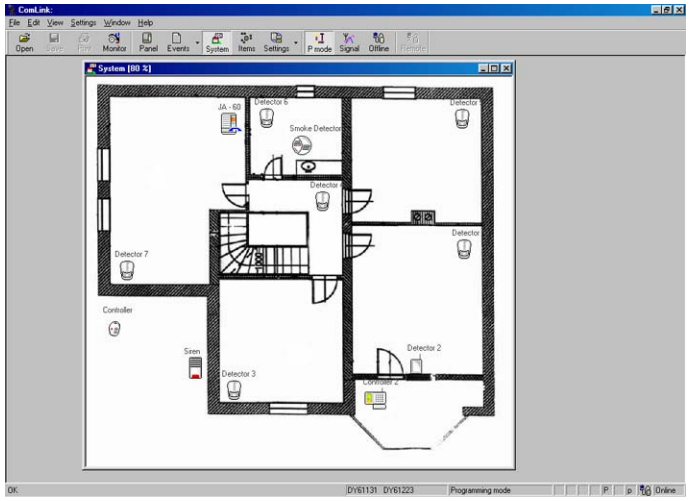
**"virtual" control panel & complete events list**



**items testing window & RF signals oscilloscope**



**programming dialogs**



**map of the system (shows current conditions in the house)**

# 15. Remote access to the system

The JA-60U modem is used for the remote connection of a personal computer with Comlink software or a JA-60E keypad to a JA-60 control panel using a public telephone line. It is necessary to know the access code for the remote control of a system (see 10.2).

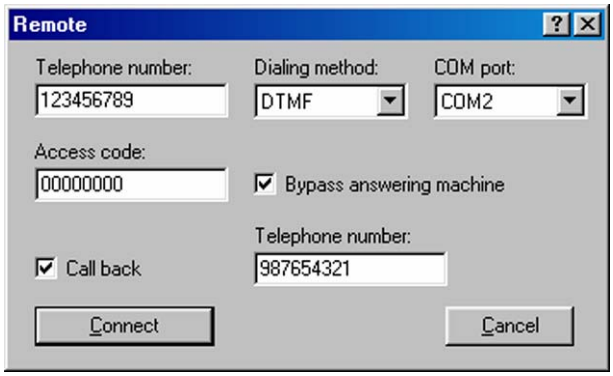
It enables a computer to remotely control a JA-60 in the same way as when it connected directly to the JA-60 PC's output (see 19). Downloading or uploading of extensive data (like event list downloading, digital communicator setting etc.) takes more time compared to a direct PC connection to the control panel. Instructions about JA-60E remote access you can find in the JA-60E manual.

## 15.1. Establishing connection with a remote control panel by a computer

Start Comlink SW on a computer equipped with a JA-60U modem (see 19). The dialing dialog requires the following data:

- telephone number of the called control panel
- dialing method (tone or pulse)
- COM port number to which the modem is connected
- control panel's remote access code (must be identical as code programmed in the control panel - 8 digits)
- select bypassing of answering machine (if this option was programmed in the control panel)
- select call back feature and enter your telephone number, if you want the control panel to call your computer back (that way the end user's telephone line will be charged for the remote access communication)

*See the JA-60E keypad's manual for details how to establish connection from a remote keypad.*




*"Dialing in" dialog of the Comlink Windows software*

## 16. Recommended Professional installer basic rules

If you install the system for a customer, you should follow these rules:

- make a drawing of intended location of the items, keeping in mind proper protection for the intended area.
- if the customer requests reduction of the system (price reasons etc.), ask for a written confirmation that he does not want the particular items you recommended (to avoid blame and liability if poorly covered area is robed in the future)
- make a professional installation and do not forget to clean and be tidy.
- it is very important to explain to the customer all functions of the system, to teach to him or her how to program access codes, how to test the system and how to replace batteries in the items
- offer your regular assistance for testing and battery replacement (we recommend annually)

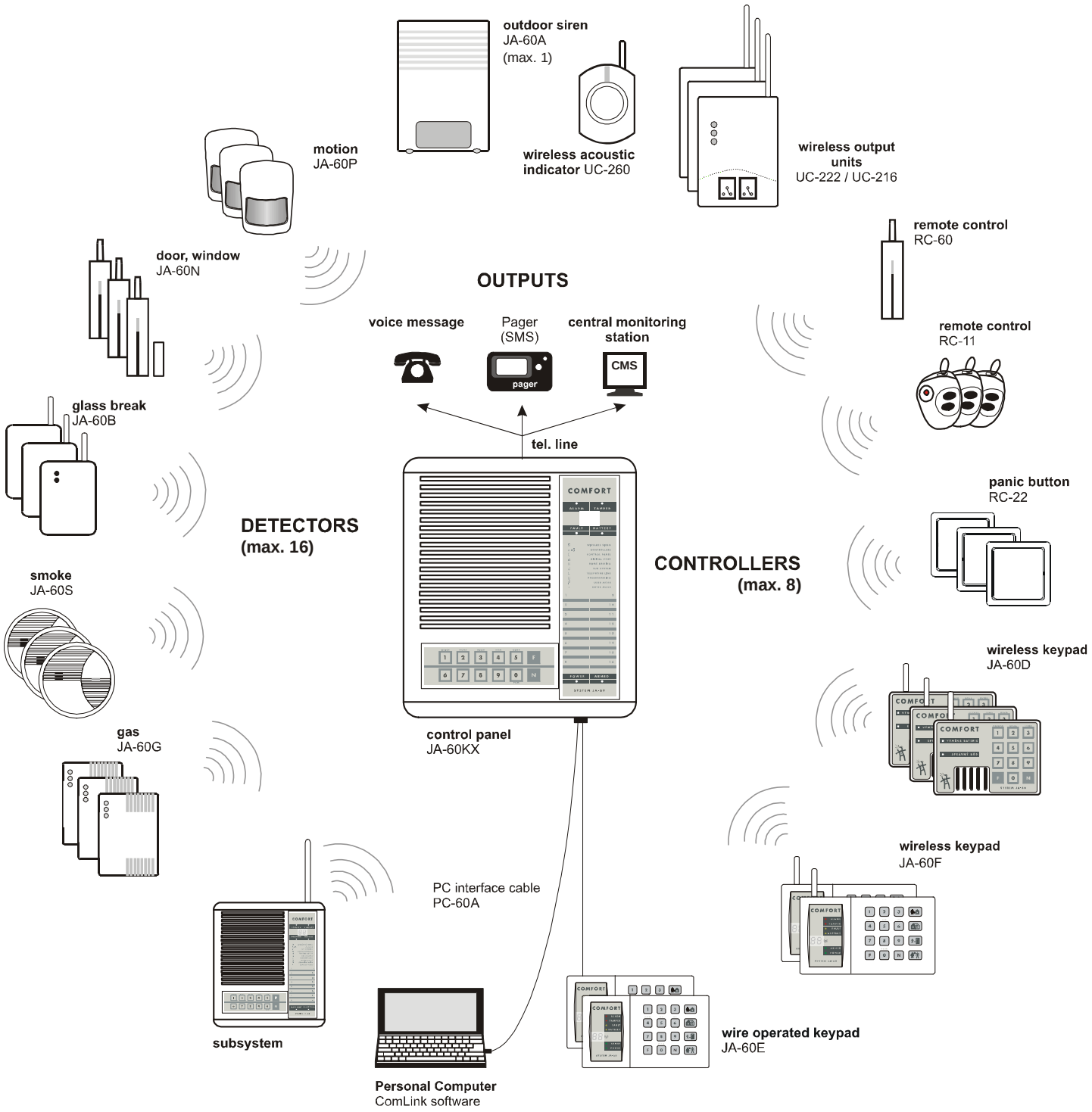
make a written report signed by the customer, that the installation was finished properly and that she or he received your training on how to operate and test the system

## 17. Trouble shooting table

| Problem | possible cause | solution |
|---|---|---|
| alarm after first powering of the control panel | the control panel is not in factory default setting | perform a factory default reset, see 11 |
| impossible to enroll a detector or a keypad | location of the item (or the control panel) is not suitable and the radio signal level is too low (too far away or an obstacle is in the way of communication) | change location of the item, (fix it in the new place temporary at first and then try it) |
| a fault is indicated on the control panel and it is beeping | check display for the reason of the trouble. Press key N to disable beeping. The trouble information is stored in the event memory and it can be reviewed entering F4 anytime in the future | check the reason of the trouble in user instructions and fix it, or call the installer |
| telephone line failure is indicated and the phone works as normal | when you make a phone call longer than 15 minutes, it is interpreted by the system that the tel. line is not ready. | if this problem repeats, disable tel. line checking in programming mode |
| JA-60P movement detector repeatedly triggers alarms with no visible reason | check if there are: animals in the protected area (mice...), sudden changes of temperature or intense air circulation, movement of objects with temperature of about 37°C etc. | increase detector's immunity (DIP SW 1 to pos. ON), change location of the detector or use an optional sensor's lens |
| fault C is indicated on the control panel | technical problem of the control panel – failure of the power supply, blown fuse in the panel etc. | check AC adapter, backup up battery, fuses or call installer |
| when activated, the tel. dialer calls a number multiple times | the telephone network (mobile network) does not use standard recognition signals and the dialer is not sure if the connection was successful or not | for calls to GSM network store F0 after the last digit to the number (see 9.1.) |
| alarm C is indicated on the control panel | jammed communication or blown fuse in the control panel | the jamming check can be disabled if necessary |
| system does not communicate with connected PC | the data cable is not connected to the correct connector on the PC | check the connection or select the port number in SW manually |
| problem is not in this list | call installer or the distributor for advice | local hot line number: |

# 18. Possibilities to extend the system

The JA-60 alarm system is a kit which can be tailor configured according to the size of the house or the needs of the user. See the structure of the system:




## 18.1 Extension of the system with a subsystem

An additional JA-60 or 65 control panel can be enrolled as a subsystem to the control panel (see 8.10.). Each system then works as an independent system. However, any event in the subsystem (alarm, tampering, failure or low battery) will trigger the same kind of event on the main control panel (the main control panel will display "J" as the event source). The main control panel will not indicate the number of the item which triggered the event, but this information is available on the subsystem's control panel.

Using this method, multiple level subsystems can be chained.

# 19. Overview of the JA-60 parts

The following description includes the basic assortment of accessories. Jablotron is systematically introducing new and improved JA-60 items to the market. You can get the most current information from your distributor or you can visit Jablotron's Internet home page at: www.jablotron.com

## Detectors

**JA-60N Magnetic door detector** - is equipped with a magnet. Movement of the magnet triggers the internal sensor in the detector. It can trigger an Instant or Delayed intruder alarm and it also has built in tamper detectors. There are inputs for external sensors (see section 7.2. for more details).

| | |
|---|---|
| *power* | *3 V=, 30 μA / 100 mA (2x AAA battery 1,5 V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +40 °C)* |
| *built in sensor* | *magnetic reed contact* |
| *external sensors inputs* | *IN & TAMP (balanced loops)* |

**JA-60P Motion detector** - triggers an Instant or Delayed intruder alarm when the movement of a human body is detected. It has built in tampering sensors and it uses digital processing of the signal for a high false alarm immunity. Optional lenses (long corridor, pet zone) are available for this detector.

| | |
|---|---|
| *power* | *3 V=, 35 μA / 100 mA (2x AAA battery 1,5 V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +40 °C)* |
| *detection method* | *dual PIR sensor with digital processing* |
| *installation height* | *from 2 to 2,5 meters* |
| *coverage* | *12m / 120° (with basic lens)* |

**JA-60B Glass break detector** - is a modern acoustic device, which performs continuous air pressure and sound analysis to recognize the breaking of a window. Digital processing provides high reliability and false alarm immunity.

| | |
|---|---|
| *power* | *3 V=, 40 μA / 100 mA (2x AAA battery 1,5 V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +40 °C)* |
| *detection method* | *dual digital analysis of acoustic signals* |
| *detection range* | *max. 9m* |

**JA-60SR Ionisation smoke detector** - The JA-60SR detects smoke and wirelessly transmits this information to a receiving unit (control panel). It also has a built in siren to warn people in the immediate vicinity. For testing purposes the detector is equipped with a testing button. You can also test it remotely using any audio/video remote control.

| | |
|---|---|
| *power* | *3 V=, 30 μA / 100 mA (2x AAA battery 1,5 V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +60 °C)* |
| *detection method* | *ionic chamber* |
| *built in siren* | *95 dB/m A (85 dB/3m)* |

**JA-60SP Optical smoke detector** - The JA-60SP detects smoke and wirelessly transmits this information to a receiving unit (control panel). It also has a built in siren to warn people in the immediate vicinity. For testing purposes the detector is equipped with a testing button. You can also test it remotely using any audio/video remote control.

| | |
|---|---|
| *power* | *3 V=, 30 μA / 100 mA (2x AAA battery 1,5 V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +60 °C)* |
| *detection method* | *IR light detection* |
| *built in siren* | *95 dB/m A (85 dB/3m)* |

**JA-60G Gas leak detector** - triggers a Fire alarm when any combustible gas is detected (natural gas, city gas, propane, butane etc.). The detector is powered directly form the AC power network and it wirelessly transmits information to the control panel. The JA-60G has a built in siren and an output relay. The relay, for example, can be wired to an electrical valve to turn off the gas supply when a leak is detected.

| | |
|---|---|
| *power* | *230V(+10 to -15%) / 50Hz, about 2W* |
| *2 sensitivity levels:* | *10% and 20% of LEL (calibrated for Methane)* |
| | *LEL = Low Explosivity Level* |
| *built in siren* | *94 dB / 0.3 m* |
| *output relay* | *selectable reaction for 1st or 2nd level* |
| *relay contact* | *max.230 V / 5 A* |
| *working environment* | *indoor use (-10 °C to +40°C)* |
| *detection method* | *catalytic oxidation* |
| *communication range* | *max. 50 m (open area)* |

## Controllers

**RC-11 Remote control** - this key chain tag sized controller can be used to Arm and Disarm the system. It can also be used to trigger a silent Panic alarm. It is powered by 6V battery and its working range is up to 30 meters. The RC-11 can also be used separately to control UC receiving modules directly (pulse, latch or ON and OFF modes).

**RC-22 Panic button** - is a large size button, which can be easily attached in a selected location (under a desk, on the wall etc.). This button can be used to trigger a silent Panic alarm. The RC-22 can be enrolled to the control panel the same way as the remote control. It has a working range up to 30 meters. The RC-22 can also be used separately to control UC receiving modules directly (pulse, latch or ON and OFF modes).

**RC-40 Remote control** - combines two pairs of buttons (A&B and 1&2). It can be used to operate multiple wireless Jablotron devices. For example, one RC-40 can control your car alarm and your house alarm system or two independent partitions in a house alarm or up to 6 different devices when used with Jablotron UC receivers.
It has a unique optional "keypad locking" feature. It is powered by a 6V battery and its working range is up to 30 meters.

**RC-60 Remote control** – controls wirelessly the system by using other hardwired devices (access systems, ID chips, cards reader etc.). It has two control inputs (A and B) and two working modes. In the first mode input A arms and input B disarms the central unit. In the second mode input A responds on every impulse by sending arming or disarming signal. Input B responds on each connection to GND by PANIC signal transmission. It is powered by two batteries type AAA, lifetime of the batteries 1 year, range up to 100 m, for indoor use.

**JA-60D Wireless control keypad** - can operate the system in a similar way as the built in keypad on the control panel (arming, disarming, no code arming, partial arming, door opening and under duress operation). It has its own Master code and one User code, which can be programmed arbitrary from the control panel's codes.

| | |
|---|---|
| *power* | *3 V⎓, 30 μA / 100 mA (2x AAA battery 1,5V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +40 °C)* |
| *codes* | *1x Master, 1x User* |

**JA-60E Wire operated keypad** - can operate and program the system in exactly the same way as the built-in keypad on the control panel. It is connected to the control panel by a cable. Up to two keypads can be connected to a single control panel. The alarm system's status is indicated by the LED indicators, the built in display and built in buzzer. Illuminated keys can be covered with a closable cover. The keypad can control the system remotely when using the JA-60U modem.

| | |
|---|---|
| *connection* | *with cable to the JA-60 digital bus connector* |
| *connecting cable* | *4 core cable with RJ connectors (4/4 1:1) or ordinary telephone cable (terminals)* |
| *length of the cable* | *max. 100 m* |
| *power supply* | *10 –14 V (taken from the digital bus)* |
| *number of keypads in a system* | *max. 2* |
| *working environment* | *indoor use ( -10 to +40°C)* |

**JA-60F Wireless keypad** - can operate system in exactly the same way as the built-in keypad on the control panel. It can also be used for programming and testing of the system. The alarm system's status is indicated by the LED indicators, the built in display and

built in buzzer. Illuminated keys can be covered with a closeable cover. The keypad has TWO-WAY communication with the control panel and it is enrolled as a controller (positions c1 to c8). Multiple JA-60F keypads can be enrolled to a single control panel.

| | |
|---|---|
| *power* | *3 V=, 5 0μA / 100 mA (2x AAA battery 1,5V)* |
| *battery life time* | *about one year* |
| *communication range* | *max. 100 m (open area)* |
| *working environment* | *indoor use (-10 to +40 °C)* |
| *optional AC adapter* | *12V ss/100mA (permanent keys illumination with the adapter)* |
| *number of keypads in a system* | *up to total number of 8 controllers* |

## Output devices

**Wireless siren JA-60A** is designated for outdoor use. It is powered from its own AC adapter and it has a built in back up battery. The siren wirelessly communicates with the control panel. It contains a high powered siren and a flashing light. Besides signaling alarms, it can also provide arming and disarming chirps. The siren has built in tamper detectors. Only one JA-60A siren can be used with each JA-60 control panel.

| | |
|---|---|
| *power* | *15V~, 0,5 A, 50 Hz (adapter SELV)* |
| *back up battery* | *6V, 1.3Ah (included) - life time about 5 years* |
| *communication range* | *max. 100 m (open area)* |
| *siren* | *piezoelectric, 118dB/1m* |
| *cover class* | *IP44* |
| *working environment* | *external use, -25 to +60°C* |

*The AN-01 external antenna can be used with the siren if a longer working range is requested or if the siren is installed in a problematic location from the point of radio communication.*

**Wireless acoustic indicator UC-260** is an indoor device which can be easily plug to the power anywhere in the house. It receives signals from the control panel and generates all sounds as the system itself (siren, exit entrance beeps etc.). Its LED indicator is following the PgY output of the control panel. Additionally it can also serve as a wireless door bell (with RC-22 or RC-28 wireless button) and JA-60 wireless detector(s) can be enrolled to generate Chime sound when the detector is triggered.

| | |
|---|---|
| *Power* | *230 V~, 1.5 W* |
| *Communicating range* | *up to 100 m* |
| *Siren* | *piezo 110dB* |
| *Number of melodies* | *8, selectable volume* |
| *Working environment* | *indoor use -10 to +40°C* |

**Wireless outputs unit UC-216** is a receiver, which receives signals from the JA-60 control panel. The unit has two output relays (X and Y, max. load 120V / 1A each). These relays have identical functions as outputs PgX and PgY of the control panel. The unit requires external power from 12 to 24VDC or 15VAC. Multiple UC-216's can be used with a control panel and each UC-216 can receive signals from more than one control panel.

| | |
|---|---|
| *power* | *12-24 V= or 15 V~, 40 mA* |
| *2x output relay* | *max. 120 V/1 A* |
| *1x output transistor* | *max. 40 V/0,2 A* |
| *communication range* | *with RC-11 & RC-22 max. 30 m*<br>*with JA-60 items up to 100 m* |
| *working environment* | *indoor use (-10 to +40 °C)* |

**Wireless output unit UC-222** is a receiver, which receives signals from the JA-60 control panel. The unit has a power output relay (max. 250VAC / 5A). This relay has an identical function as output PgX of the control panel. The unit is powered directly from the AC power (230 VAC). Multiple UC-222's can be used with a control panel and each UC-222 can receive signals from more than one control panel.

| | |
|---|---|
| *power* | *230 V~* |
| *consumption* | *1 VA (0,6 W) standby / 1,8 VA (1 W) relay on* |
| *output relay* | *max.6 A, 250 V* |
| *communication range* | *with RC-11 & RC-22 max. 30 m*<br>*with JA-60 items up to 100 m* |
| *working environment* | *indoor use (-10 to +40 °C)* |

**Use of UC-216 and UC-222 directly with JA-60 detectors** - the wireless output modules can also be used directly with JA-60 system items (detectors, keypads, remote controls). In this case the receiving unit reacts to the signals from the items which were enrolled to this unit. The item can be a part of the JA-60 alarm system and its data is received by both the control panel and the UC receiver. Or, the items can be used with UC units directly.

**Telephone dialer module JA-60X** - the control panel is available without the dialer (model JA-60K) or with the built in dialer (model JA-60KX). The JA-60X dialer module can be easily installed to a JA-60K control panel as an after market accessory. The dialer can send a voice message(s) to four telephone numbers and it can also send a numeric message to a Pager. The dialer regularly checks if the telephone line is ready, yet allows the line to be used as a normal phone line inside the house. The dialer can also communicate with a monitoring station or with a remote PC. The dialer is designed for ordinary analog telephone line (TNV-3 type).

**PC interface cable PC-60A** - can be used to connect the control panel to a serial port (COM1 or COM2) in your computer. Suitable SW, ComLink, is provided on a floppy disk or you can visit Jablotron's Internet home page at: *www.jablotron.com* to download a beta version of it. The software is a convenient way to setup the control panel, to supervise the system which is on line, to read, view and store data from the event memory and to record other information about the system. The software can be installed under MS DOS or Windows system (see 14).

You can learn more about the SW features, when you install it on your computer. Even without the PC-60 interface cable you will be able to run the software in its off-line mode. The software has a built in help section.

It is possible to dial in to the control panel from a remote computer equipped with **JA-60U modem** and Comlink software. Instead of a computer, the JA-60E system keypad can be used, too. Installers mostly use the modem, but end user can use it as well (e.g. for remote arming and disarming etc.). The JA-60U is supplied together with power adapter, PC interface cable and Comlink software. The JA-60E keypad can by plugged directly to the data connecter of the modem.