The JA-80Y GSM communicator

The communicator is a component of the Jablotron Oasis 80 system. This manual is valid for software version XA61010 or higher. The communicator is designed to be installed within the control panel housing. When connected to a GSM network it allows the following:

- event reporting by SMS (to up to 8 telephone numbers)
- event reporting by phone call with an acoustic warning
- event reporting to an ARC (Automatic Receiving Centre – also known as a Central Monitoring Station) - up to 2 ARCs
- remote control and programming by phone (remotely authorizing a phone keypad or by SMS instructions)
- the remote control of appliances in the house by dialling in from an authorized number (free of charge with unanswered calls)
- remote control and programming via the Internet (www.GSMlink.cz)
- connecting a phone set = simulated tel. line = GSM gateway function (incl. CLIP protocol = caller ID and SMS transfer)
- listening-in and voice communication – via a connected SP-02 intercom
- connecting a PC to the Internet (GPRS modem feature)

1. Installation in the control panel

If you purchased the communicator module separately, it should first be installed in the Oasis control panel as follows:

a) the control panel **power must be switched off** (both mains and battery)

b) **Fit the communicator** inside the control panel housing using screws and **connect its cable** to the main board

c) attach the **adhesive GSM antenna to** inside the control panel's plastic housing (on the lower internal wall) and connect the antenna to the communicator – **never switch the control panel power on** if the GSM antenna is not connected to the GSM module as this will cause serious damage.

d) **connect the relevant cables** to the communicator if you intend using the simulated telephone line, the AUX output or a PC serial data cable for the GPRS modem function
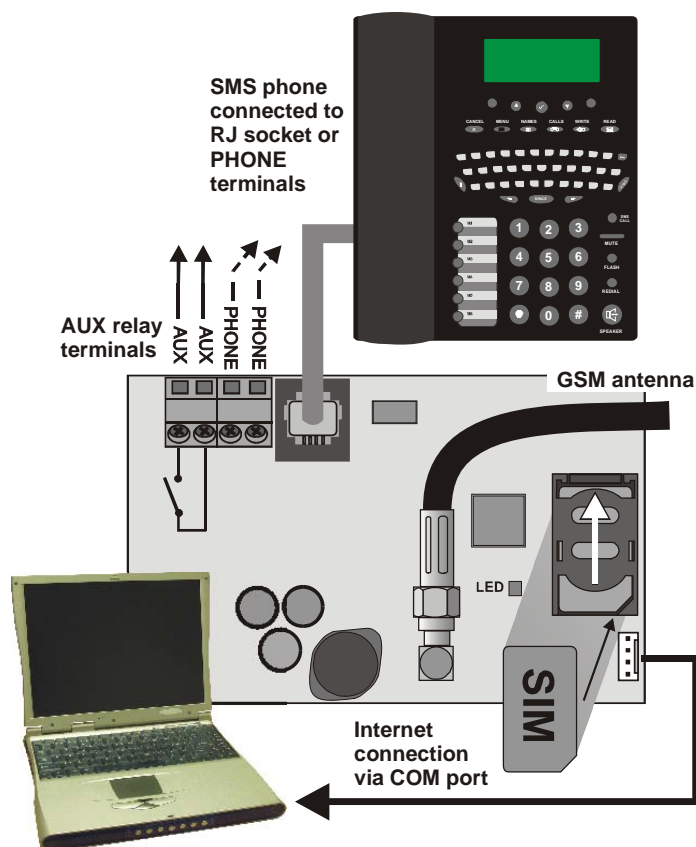

Fig. 1 Communicator wiring

2. Powering up the communicator for the first time

If the communicator is installed in the control panel and its GSM antenna is connected then:

a) **have a suitable SIM card ready**. It should be activated (see if it works in a mobile phone first). If it requires a PIN code when turning the phone on, then disable the PIN code request (for example in Nokia via: Menu / Settings / Security settings / PIN code request / Off). The communicator can work with a prepaid card, but for more reliable functioning use a tariff card (see 5.16).

b) **insert the SIM card** into the communicator (to open the card holder push its frame up a little)

c) **switch on the control panel power** (mains and battery). The communicator's **red LED** should go off **within a minute** = successful registration to the GSM network.
   If the red LED starts flashing after awhile, switch off the control panel power, put the SIM card into a mobile phone and check that it registers to the network in place of the control panel and without any PIN code requests.

d) **close the control panel cover**, the alarm system should be in Service mode - if it is not, enter ∗0 Service code (factory default: 8080) with the alarm system unset (disarmed).

e) key in **98101 -** to set **texts** of the communicator to English language.

f) **key in 922 to measure the GSM signal** strength (should indicate in the range 0/4 to 4/4). It should be **at least 2/4** for reliable functioning. If the signal is weak, change the location of the control panel or try a SIM card from another GSM provider (it is not recommended to use either a high-gain or directional antenna– see 5.2).

g) if the GSM signal is sufficient, **test the communicator functions** (for example calling the system's SIM card number and authorizing the phone keypad you are using) – see 3.3.

If installed at a location near a national border where roaming to a foreign network is highly likely (e.g. when the signal strength is fluctuating), we recommended blocking the roaming feature in the SIM card to avoid unnecessarily high communication fees. Contact your GSM provider for details.

3. User functions of the communicator

The following text describes all communicator features. The installer should show the end user how to operate the functions used in a particular installation.

3.1. Making a phone call from a connected phone

The communicator provides a simulated phone line (including CLIP protocol) to connect a phone set:

- **the phone** (tone dialling only) should be connected to the **telephone socket** on the communicator board (or to the PHONE terminals)
- the phone can be used **as if connected to a standard telephone line** (factory default settings of the communicator)
- if the phone supporting SMS messages is used, then **besides phone calls** it is also possible to send and receive **SMS messages** (see 5.11.1)
- the **communicator terminates current phone calls** if it is due to send event reports
- some phone sets are sensitive to nearby GSM radio signals. If **you hear strong interference** in the phone receiver caused by the communicator's GSM signal, change the location of the phone set.

3.2. Listening-in and voice communication

If listening-in and voice communication are needed, then an SP-02 intercom should be connected to the phone line simulated by the communicator. The intercom can be connected in parallel to any existing phone set. The SP-02 works as a speaker-phone which answers calls automatically when coming from telephone numbers authorized to access the listening-in feature. The SP-02 also provides a push-to-talk feature to call a number stored in its memory. See the SP-02 manual for details on how to authorize numbers to listen-in, and how to program the push-to-talk number.

3.3. Temporarily authorizing a phone keypad to be a system keypad

It is possible to operate the system remotely by temporarily authorizing a phone keypad as follows:

a) **dial the system's SIM card number** (if a phone is connected to the communicator's simulated line it will start ringing)

b) **after 25 seconds** of ringing (programmable) the system will answer with a **short beep**

c) **key in a valid access code** on the telephone keypad (e.g. 8080 or 1234 if factory default settings are still valid)

d) the phone **keypad will behave as a system keypad** and an **acoustic signal** in the receiver **will indicate the control panel status**: *1 beep = SET, 2 beeps = UNSET, 3 beeps = Service mode, 4 beeps = incorrect code entry, siren sound = alarm*

e) now the system **can be operated from the phone keypad** the same way as from the system keypad – including the commands starting with ∗ (for example ∗81 to turn the PGX output on)

f) to exit this mode simply end the phone call (if nothing is entered within a minute, the phone call will end automatically anyway)

Notes:

▪ **do not enter sequences on the phone too fast**, each key signal needs a certain time to be sent (it depends on the particular phone and the quality of the GSM connection)

▪ a **fixed-line phone can also be used** to operate the system remotely the same way (the phone must use tone dialling)

▪ the system **can also be operated from the keypad of a phone connected directly to the communicator's simulated line**. It is only necessary to pick up its receiver and briefly press the # key. Then the phone is ready to work as a control panel keypad. To finish operating just hang up.

▪ Phone keypads have to be re-authorized each time the system is called by entering the codes specified earlier, as phone keypads are only authorized as system keypads for the duration of a call to the system.

3.4. SMS instructions to control the system remotely

All incoming SMSes are checked by the communicator and if there are any instructions to the system, they will be performed. Each instruction message must have the following format:

<div align="center">

code ‿ instruction

(valid code <u>space</u> instruction)
</div>

Valid code = any valid code in the system (e.g. 8080, 1234 etc.)

The factory-default instruction texts (editable – see 5.5)

Instruction	Function	Note
SET	setting (arming)	setting or unsetting (the same way as if the used code is entered on the system keypad), If the system is already in the desired mode, it will not change
UNSET	unsetting (disarming)	
STATUS	status interrogation	including GSM signal strength, GPRS data, ARC communication (shown as MS1 and MS2)
MEMORY	last event interrogation	The last event recorded in the control panel memory
PGX ON	turns on PGX	the PG output has to be programmed for the function: on/off (by 237/247) or 2 second switching (by 238/248)
PGX OFF	turns off PGX	
PGY ON	turns on PGY	
PGY OFF	turns off PGY	
AUX ON	turns on AUX	turns a pair of AUX terminals on the communicator module on/off
AUX OFF	turns off AUX	
CREDIT	SIM card credit interrogation	it has to be initialised by SMS before it can function – see 5.17

Example: by sending: "code SET" (valid code space SET) the system will set (if it is already set it will not change its status)

Notes:

▪ performance of the instruction is confirmed by an SMS reply

▪ the instruction texts are not case-sensitive and only ASCII characters are allowed

▪ only one instruction can be in an instruction SMS

▪ a setting/unsetting instruction starting with the service code will only be performed if setting/unsetting with the service code is enabled in the control panel (to protect against unauthorized setting/unsetting by installers)

▪ an SMS instruction can also be sent to the alarm system from a phone connected to the communicator (if supports SMS) – to phone number 001 (for free)

▪ if there is any other text in the instruction not separated by "%", the instruction will not be performed

▪ if you are sending an instruction and you are not sure whether any other text will be automatically added to the SMS (for example, when

using an SMS internet gate) type the instruction as: **%code instruction%%**

3.5. Toll-free remote control by unanswered calls from pre-authorized phones

A limited number of system functions can be activated remotely by calling the system from pre-authorized phones and terminating calls before the system answers. This way limited control of the system is free of call charges. It is possible to pre-authorize phone numbers stored in memories M1 to M8 (also used for event reporting – see 4).

To pre-authorize a telephone number store ∗ at the end of the number and follow it by a single digit (1, 2, 3, 8 or 9) – see the notes in section 4.

If this number calls, the communicator generates "∗ digit" after the first ring (as if it had been entered manually on the system keypad). This toll-free remote control by unanswered calls enables the following functions according to the digit stored at the end (after the ∗) of the tel. number in memory:

▪ **∗1**   **setting the complete system** (= ABC keypad button)

▪ **∗2**   **setting section** A (= A button)∗

▪ **∗3**   **setting sections A & B** or B (= B button)∗

▪ **∗8**   **PGX turns on for 2 sec.** (if PGX is programmed for the pulse function)

▪ **∗9**   **PGY turns on for 2 sec.** (if PGY is programmed for the pulse function)

Notes:

▪ if a phone sends no **caller identification data** it cannot be used for this type of remote control by phone

▪ if phone calls end before the control panel answers, remote control is **for free**

▪ a phone which is pre-authorized for toll-free remote control **can also temporarily authorize its keypad** to **fully** operate the system (see 3.3) – just let it ring until the control panel answers the call

▪ if it is desired that the phone which is authorized for toll-free remote control should not receive event reports, then turn the reports off for that tel. number (see 5.4).

▪ setting (arming) with ∗1, ∗2 and ∗3 will work only if enabled in the control panel

4. Reporting to phones

The communicator can report events occurring in the Oasis system by sending SMS reports and/or by calling phone numbers with an acoustic signal (mostly used as audible notification of an SMS to be read). Reporting can be programmed for up to 8 phone numbers.

The most frequently desired reports are already assigned to the telephone number memories by factory-default, so you only need to program tel. numbers to the particular memories which have the desired reports already assigned. If desired, other events can be reported to the number too, i.e. the list of event reports assigned to the number can be changed (see 5.4)

Factory-default reports assigned to the numbers M1 to M8

M	Reports
1	Alarms and faults by SMS
2	
3	Alarms and faults by SMS + phone call (if you answer the call you hear a siren sound)
4	
5	Alarms by SMS + a phone call, with Setting/Unsetting and faults by SMS only
6	
7	Alarms by phone call (if you answer the call you hear a siren sound)
8	Technical fault by SMS (suitable for an installer)

To program phone numbers to the M memories, enter the following sequence while in Service mode:

    81 M xxx...x ∗0
       where:
         M   is memory 1 to 8
         xxx...x is a phone number (max. 20 digits)

Example: *entering* **81 5 777 777 777 ∗0** *will store the number 777777777 in memory M5 (Alarms will be reported by SMSes + phone calls, Setting/Unsetting and faults only by SMS)*

To erase a number from memory M enter: **81 M ∗0**

Notes:

▪ Entering **∗9** before the first digit will insert a "**+**" for the international formatting of phone numbers

- if it is desired that the events be **reported to the SMS phone connected to the communicator** then program tel. number **001** into the memory
- **SMS report text consists of**: installation name, event name, number and name of the event source (device or code), date and time. Example: "Report from your alarm: setting 47: device Time 01.08. 11:27"
- if **other events or texts should be reported** to a particular number, change the communicator settings (see 5.4 and 5.5)
- when storing tel. numbers, if you key in ∗7 after the last digit of the phone number (the symbol ∗ is also stored) and continue with one more digit (1, 2, 3, 8 or 9), then if this tel. number calls the system, the system will behave as if "∗ digit" had been keyed in just after the first ring, i.e. as if it had been entered manually on the system keypad – **see section** 3.5. Example: entering *81 5 777 777 777 ∗79 ∗0* authorizes calls from tel. number 777777777 to trigger output PGY for 2 seconds (after the first ringing signal from this number the ∗9

command will be executed. The PGY output should be programmed for a 2 sec. pulse function. This setting is suitable for opening an electric door lock, automatic gate etc.

4.1. Programming

The most convenient programming is best done by a PC running Comlink software or via the Internet and website: www.GSMLink.cz or by programming SMS – PRG sequence

Programming is also possible via the system keypad:

- The control panel must be in **Service mode** - if it is not, enter ∗0 Service code (factory default: 8080) while the system is unset.
- Enter the relevant programming sequences – see the following description
- **To exit service** mode press the **#** key

5. Programming sequences

Function	Sequence	Options	Factory default
Language setting	**981 xx**	xx=01 to 17 where: 01=EN,02=CZ,03=SK,04=NL,05=DE,06=PL,07=DA,08=IT,09=PT,10=FI,11=NO,12=SV, 13=FR, 14=HU, 15=RU, 16=TR, 17=SP	English
GSM signal strength measurement	**922**	*On keypad or in ComLink software range 0/4 to 4/4* *In reply to STATUS SMS: range 0/9 to 9/9* exit by pressing #	-
Tel. number programming for reporting to telephones	**81 M xx..x ∗0**	**M** = memory 1 to 8 **xx..x** = tel. number (max.20 digits) keying in ∗9 = + and ∗7 = ∗ **81 M ∗0 erases** the number in memory M	all M1 to M8 erased
Selection of events to report by SMS	**82 M ec x**	**M** = tel. number memory from 1 to 8 **ec** = event code (see 5.4) **x=1** report, **x=0** no report	M1 & 2 alarms by SMS M3 & 4 alarms by SMS and call M5 & 6 alarms by SMS and call + Set/Unset by SMS M7 alarms by call M8 technical faults by SMS (to installer)
Selection of events to report by phone call	**83 M ec x**		
SMS text editing*		Texts can be edited by Comlink software or by SMS instruction: **code TXT n,text,n,text...** or by www.GSMLink.cz via Internet	see 5.5
Enable reporting to phones	**80 x**	x=0 disabled x=1 enabled (all programmed by 82.. & 83..) x=2 enabled **without reporting setting/unsetting by users 41 to 50** (codes, cards & key-fobs) and master code setting/unsetting	enabled
Remote access	**903 x**	x=0 disabled x=1 enabled (by phone and Internet)	enabled
Forwarding of incoming SMSes	**926 x**	x=0 no, x=1 yes = if the incoming text is not an SMS instruction it will be forwarded to the first programmed number in memories M1 to M8	yes
SMS instruction confirmation	**927 x**	x=0 no, x=1 yes (by SMS reply)	yes
Reaction to incoming calls	**904 x**	x=0: no reaction x=1 to 8: answers after 1 to 8 rings x=9: answers after the 2nd call	answers after 5 rings (25s)
Simulated phone line function	**951 x**	x=0 tel. line (GSM gateway) x=1 alarm system keypad x=2 off x=3 automatically calls an emergency tel. number when the tel. receiver is picked up	tel. line
Emergency tel. number	**952 xx..x ∗0**	xx..x = tel. number (max.20 digits)	erased
GSM signal dropout indication	**921 x**	x=0 no, x=1 yes (15min. dropout =Fault)	no
Phone microphone sensitivity	**953 x**	x=1 to 9 (9 = maximum)	5
Phone speaker loudness	**954 x**		
Number to be periodically called to maintain SIM card validity	**924 xx..x ∗0**	xx..x = tel. number (max.20 digits), 924∗0=erase	erased
Using an SMS instruction to configure automatic SIM card credit interrogation *		Via an SMS instruction to the alarm system: **code CREDIT uu..u xx yyy zz** where **code** = master or service code, uu..u = GSM network command string to ascertain the credit (e.g. ∗104#) , xx=auto-interrogation frequency in days, yyy=minimum acceptable balance, zz= the textual position at which the number showing the balance starts in the reply message from the GSM provider. If the credit is lower than the minimum, the provider's SMS will be auto-forwarded to numbers M1 and M8 for someone to top up the pre-paid SIM card.	
Getting your www.GSMLink.cz registration code sent to your mobile phone	**910 xx...x ∗0**	xx..x = your mobile phone number	-

Automatic SIM card credit interrogation	Credit balance checking is set by SMS instruction **code_CREDIT_uu..u_xx_yyy_zz** where uu..u = instruction for the GSM network (e.g. ∗101# etc.), xx= period in days, yyy=minimum balance, zz= the position in which the number showing the balance starts, If the reported credit balance is lower than the set limit (yyy), the credit balance message from the provider will be forwarded to phone numbers M1 and M8		
Programming by SMS	System can be programmed remotely via SMS instruction **code PRG seq, seq,... where** seq is programming sequence set also from the keypad (e.g. **8080 PRG ∗08080,201,#** set the 10s exit delay)		
Triggering re-registration to the GSM network	**923**	The communicator will unregister from the GSM network and then re-register. Also possible via the SMS instruction: **code GSM.** Code = master, user or service code	
Communicator reset	**98080**	Resets to the factory default settings and erases all phone numbers, text will not be changed	
Memorizing the SIM card's PIN code in the communicator	**920 xx..x ∗0**	xx..x = new PIN, sequence 920∗0 erases the PIN (to use a SIM card with a disabled PIN)	erased
Configuring the GPRS log-in parameters∗	by SMS instruction to the alarm system: **code GPRS x..x,y..y,z..z** where code = master or service code, x..x = the APN, y..y = name, z..z = password (only enter the APN if the name and password are not required by the GSM provider)		
ARC main tel. number/IP address	**01 a xx..x ∗0**	a=1=ARC1, a=2=ARC2, xx..x = tel. number (max.20 digits) or **IP address & port** – for example: 01 2 ∗8 192 168 001 123 08080 ∗0 (∗8= signifies an IP address, it must have 12 digits followed by a 5 digit port number). Entering 01p∗0 or 02p∗0 will erase the number/address	erased
ARC backup tel. number/IP address	**02 a xx..x ∗0**		
Installation (alarm system) ID for ARC use	**03 a zz..z ∗0**	a=1=ARC1, a=2=ARC2, zz..z = ID number max. 8 digits 0 to 9 and ∗1=A to ∗6=F (hexadecimal number)	0000
Selecting the ARC protocol	**04 a x**	a=1 ARC1, a=2 ARC2 x=0 CID, x=1 SMS CID, x=2 IP CID	CID
Selection of events to report to ARCs	**05 a ec x**	a=1 ARC1, a=2 ARC2 **ec** event code (see 5.27) **x=1** report, **x=0** no report	all events are reported
Defining the delay before data is resent to an ARC	**06 a x**	a=1 ARC1, a=2 ARC2 x=0 to 9 min. (0=immediately, without delay)	1 minute
ARC communication checking period (The time to wait after the last report before performing an ARC communication check)	**07 a hhmm**	a=1 ARC1, a=2 ARC2 hhmm = hours and minutes after last report	2400 (24 hours after last report)
Enable ARC reporting (ARC2 backs up ARC1)	**00 a x**	a=1 ARC1, a=2 ARC2 x=0 reports disabled, x=1 reports enabled, x=2 (only for ARC2) = ARC2 backs up ARC1	ARC reporting disabled
Recording reports sent to ARCs in the control panel memory	**08 x**	x=0 no (only records ARC communication faults, if communication checks are enabled) x=1 yes (all reports except communication checks)	yes
Indicate an ARC communication fault if a report is not successfully received by an ARC within 110 sec of transmission.	**09 x**	x=0 no x=1 yes	no
IP address for data transmission	**013 xx..x ∗0**	**IP address and port** in format – e.g..: 013 ∗8 192 168 021 123 08080 ∗0 (∗8 mark IP address which must contain 12 digits, followed by 5 digits for the port.. Entering 013∗0 IP erase the setting	77.104.220.129 7070 (img.jablotron.com)
Locking the ARC settings	**901 xx..x ∗0**	xx..x = an installer-defined locking code (4 to 8 digits). Entering this code and then exiting service mode will lock the ARC settings **901∗0** will erase the code **(= permanently unlocked)**	Unlocked
Unlocking the ARC settings	**900 xx..x ∗0**	xx..x = the locking code used by sequence 901	ARC programming can be **temporarily enabled** in service mode by entering this sequence. It will then relock on exiting service mode.

These parameters effect reporting to the ARC and it is impossible to change them if the ARC settings are locked.

∗ These parameters cannot be programmed from the system keypad, but they can be programmed by sending SMS instructions or by Comlink software.

5.1. Language setting

Language of the text used by the communicator can be set by instruction:

981 xx

Where:

01	EN	English	10	FI	Finnish
02	CZ	Czech	11	NO	Norwegian
03	SK	Slovak	12	SV	Swedish
04	NL	Dutch	13	FR	French
05	DE	German	14	HU	Hungarian
06	PL	Polish	15	RU	Russian
07	DA	Danish	16	TR	Turkish
08	IT	Italian	17	SP	Spanish
09	PT	Portuguese			

Note:
- *Set the language before editing the text in the system (change of the language will change the text to the factory default)*
- *Change of the language in the communicator will automatically result in changing the language in the connected keypad (also the wireless keypad if connected)*
- *Set language will not be change when reset is performed*

Example: by setting **98102** the Czech language will be set.

Factory default :   98101 = English

5.2. GSM signal strength measurement

Good quality GSM signals are necessary for the reliable functioning of the communicator. Entering **922** starts GSM signal measurement. The keypad then displays the signal strength in the range 1/4 to 4/4 and measurement is repeated every second (indicated by beeps). This mode allows a suitable location to be found for the control panel (or the GSM antenna). **Press the # key** to **exit GSM signal measurement**.

The SMS reply to a STATUS interrogation now displays GSM signal strength in the range 0/9 to 9/9.

The signal should read at least 2/4. In places with a weak signal we recommended trying another GSM provider's SIM card.

Warning: it is not recommended to use a high-gain or directional GSM antenna to get a better signal, as this way the communicator would only communicate with a single cellular base station and communication would not be stable. Also be aware that the GSM system cannot work properly if the distance from the cellular base station is longer than 30km (even if the signal is strong enough) as the time delays in the data exchange would be longer than acceptable to the GSM standard.

5.3. Programming tel. numbers for reporting to phones

See part 4.

5.4. Selection of the events reported to phones

The factory-default list of reported events and their assignment to telephone numbers M1 to M8 can be altered by this sequence.
- The complete list of reportable events is shown in the following table.
- It is possible to select whether the event should be reported by an SMS or by a phone call, or by both an SMS followed by a phone call
- Each event has pre-programmed factory-default SMS text. These texts can be edited (see 5.5). The acoustic signals for phone call reporting are fixed and cannot be changed (e.g. an alarm is indicated by a siren sound if a reporting call is answered)

List of events which can be reported to phones and their factory-default assignment to particular phone numbers

ec	Event	Phone number memory M							
		1	2	3	4	5	6	7	8
01	Intruder alarm - instant	S	S	SC	SC	SC	SC	C	
02	Intruder alarm - delayed	S	S	SC	SC	SC	SC	C	
03	Fire alarm	S	S	SC	SC	SC	SC	C	
04	Panic alarm	S	S	SC	SC	SC	SC	C	
05	Number of permitted incorrect code-entries exceeded	S	S	SC	SC	SC	SC	C	
06	Alarm triggered during control panel power-up	S	S	SC	SC	SC	SC	C	
07	Tamper alarm	S	S	S	S	S	S		
08	End of tamper alarm								
09	End of alarm indication								
10	Alarm cancelled by user	S	S	S	S	S	S		
11	Setting					S	S		
12	Unsetting					S	S		
13	Partial setting					S	S		
14	Codeless setting					S	S		
15	External communication fault	S	S	S	S	S	S		S
16	External communication restored								
17	Fault	S	S	S	S	S	S		S
18	Fault no longer present								
19	Mains dropout longer than 30 minutes	S	S	S	S	S	S		S
20	Mains dropout								
21	Mains restored								
22	Discharged battery	S	S	S	S	S	S		S
23	Battery OK								
24	Switching to Service Mode								
25	Leaving Service Mode								
26	PGX ON/OFF								
27	PGY ON/OFF								
28	Radio communication jamming present	S	S	S	S	S	S		S
29	Internal communication fault	S	S	S	S	S	S		S
30	Internal communication restored								
31	Communication test								
32	Unconfirmed alarm								

- Factory-default report assignment: **S = SMS, C = call**, **SC = SMS followed by a call**
- External communication fault means a GSM network dropout longer than 15 minutes (if GSM network dropout indication is enabled)
- The SMS information about a new picture on the server is sent to all phone numbers which are set to get reported event number 01 "Intruder alarm - instant". This information contains a link to the new picture on the server.

5.4.1. Assigning events to be reported by SMS to a particular mobile phone number

To link events to being reported by SMS, enter:

82 M ec x

where

M	phone number memory 1 to 8
ec	event code 01 to 32 (see the above table)
x	**0** = no SMS report, **1** = SMS report

Example: if **82 8 03 1** is programmed and a fire alarm is triggered (event 03 in the table), it will be reported by SMS to the phone number stored in memory M8

5.4.2. Assigning events to be reported by phone call to a particular phone number

To link events to being reported by phone call, enter:

83 M ec x

where

M	phone number memory 1 to 8
ec	event code 01 to 32 (see the above table)
x	**0** = no phone call, **1** = call

Example: if **82 1 03 1** is programmed and a fire alarm is triggered (event 03 in the table), the phone number stored in memory M1 will be called and if the call is answered, a siren sound will be heard.

Notes:
- *Phone call reports are mostly used as an audible notification to alert the user of a detailed report sent by SMS*
- *If both SMS + call reports are enabled for events, the SMS is sent first and then the number is called afterwards. But total priority is given to ARC reports if enabled (see 7.1)*

5.5. SMS text editing

The communicator contains various text strings which are used to create SMS reports and also SMS instruction text. Language of the text can be set – see 5.1. These text strings cannot be changed from the system keypad, but they can be edited by Comlink software, via the Internet (www.GSMLink.cz) or by sending the following **SMS instruction**:

code_TXT_n,text,n,text,......n,text

where

code	is a valid access code (e.g. factory defaults: 8080, 1234)
_	is a space
TXT	instruction to edit texts
n	text number (0 to 611 see the following table)
,	comma (or full stop)
text	the new text (max. 30 characters) which will replace the former text. It is invalid to enter a comma or a full stop inside the text string, but a space is valid within the text string

Notes:
- *A single TXT instruction can change multiple texts (limited only by the maximum length of a single SMS)*
- *the communicator is not case-sensitive and it is recommended to use only English ASCII characters (some networks do not support non-English national characters)*
- *the communicator creates SMS reports with 5 parts: installation name, event description, source (code or device) number (01 to 50), source name, time and date*
- *the maximum possible length of an ASCII SMS is 160 characters (only 70 characters for national characters). If this length is exceeded, the report is sent as multiple SMSes*

Examples: if the service code is 8080 then the SMS instruction:
8080 TXT 20,key fob Bob,21,Key fob Jane
changes the description (name) of the key fobs enrolled to addresses 20 and 21

8080 TXT 605,heating on,606,heating off
edits the text of the two instructions used to command the heating to be switched on and off by the PGX output (the PGX output must be programmed to have an ON/OFF function)

Factory-default SMS report and instruction texts

n	Factory text	n	Factory text	n	Factory text	n	Factory text
0	Report from your alarm:	44	Device	332	Code	504	Panic alarm
1	Device	45	Device	333	Code	505	Invalid code-entries exceeded
2	Device	46	Device	334	Code	506	Alarm when power turned on
3	Device	47	Device	335	Code	507	Tamper alarm
4	Device	48	Device	336	Code	508	End of tamper alarm
5	Device	49	Device	337	Code	509	End of alarm indication
6	Device	50	Device	338	Code	510	Alarm cancelled by user
7	Device	201	Control panel	339	Code	511	Setting
8	Device	202	Service code	340	Code	512	Unsetting
9	Device	203	Annual inspection request	341	Code	513	Partial setting
10	Device	204	Communicator	342	Code	514	Codeless setting
11	Device	205	Keypad	343	Code	515	External communication fault
12	Device	206	ARC code	344	Code	516	External comm. restored
13	Device	300	Master code	345	Code	517	Fault
14	Device	301	Code	346	Code	518	Fault no longer present
15	Device	302	Code	347	Code	519	Mains dropout over 30 minutes
16	Device	303	Code	348	Code	520	Mains dropout
17	Device	304	Code	349	Code	521	Mains recovery
18	Device	305	Code	350	Code	522	Discharged battery
19	Device	306	Code	400	System status	523	Battery OK
20	Device	307	Code	401	Set	524	Switching to Service Mode
21	Device	308	Code	402	Unset	525	Leaving Service Mode
22	Device	309	Code	403	Exit delay	526	PGX
23	Device	310	Code	404	Entrance delay	527	PGY
24	Device	311	Code	405	Alarm	528	Radio jamming present
25	Device	312	Code	406	Service mode	529	Internal communication fault
26	Device	313	Code	407	Maintenance mode	530	Internal comm. restored
27	Device	314	Code	408	Partial setting	531	Communication test
28	Device	315	Code	409	Discharged battery	532	Unconfirmed alarm
29	Device	316	Code	410	Tamper alarm	601	SET
30	Device	317	Code	411	Alarm memory	602	UNSET
31	Device	318	Code	412	Fault	603	STATUS
32	Device	319	Code	413	Power fault	604	MEMORY
33	Device	320	Code	414	Unknown status	605	PGX ON
34	Device	321	Code	415	Time:	606	PGX OFF
35	Device	322	Code	416	Last event:	607	PGY ON
36	Device	323	Code	417	Credit unknown	608	PGY OFF
37	Device	324	Code	418	Credit:	609	AUX ON
38	Device	325	Code	419	(internal use only)	610	AUX OFF
39	Device	326	Code	420	Error while processing command	611	CREDIT
40	Device	327	Code	421	Output turned on		*Numbers 01 to 50 for devices and codes are automatically generated by the communicator so it is unnecessary to enter them in the text*
41	Device	328	Code	422	Output turned off		
42	Device	329	Code	501	Instant alarm		
43	Device	330	Code	502	Delayed alarm		
		331	Code	503	Fire		

- The communicator always automatically puts numbers from 01: to 50: in front of Device or Code names.
- Texts 0 to 532 are used to create SMS **event reports**
- Texts 601 and 611 are **SMS instructions** (to control the system remotely by SMS)
- Text 419 is for the internal use of the communicator, **never edit** it !

5.6. Enabling reporting to phones

Event reports can be enabled as follows:

800 all SMS and call reports disabled
801 all SMS and call reports enabled
802 all reports enabled **except reports of setting and unsetting by users 41 to 50** (i.e. their codes, cards and key fobs). This allows setting and unsetting done by report recipients (owners, bosses, etc.) not to be reported.

Factory default setting: 801 all reports enabled

5.7. Remote access

Remote access (by phone or Internet) can be enabled or disabled:

9030 disabled
9031 enabled

Factory default setting: enabled

5.8. Forwarding of incoming SMS messages

This feature enables the automatic forwarding of incoming SMS messages which contain no valid instructions to the system:

9260 messages are not forwarded, but the communicator sends them by CLIP protocol to the simulated phone line

9261 messages **are forwarded** to the first programmed tel. number in memories M1 to M8 (e.g. if numbers are only programmed in M5 and M6, then messages will be forwarded to M5). The tel. number from which the SMS was received will be shown at the beginning of the forwarded text.

Factory default setting: messages are forwarded

5.9. SMS instruction confirmation

If the communicator receives a valid SMS instruction, the instruction sender will be made aware of its successful execution by the reception of a conformation SMS sent by the communicator. This confirmation can be disabled as follows:

9270 disabled
9271 enabled

Factory default setting: enabled

5.10. Reaction to incoming calls

The communicator's reaction to incoming phone calls can be set by:

904 x

where

x = 0	incoming calls are ignored
x = 1 to 8	the communicator will answer after x multiplied by 5 seconds of ringing (e.g. x=4=20sec.)
x = 9	answers after a second call - first there must be at least one ring, then a pause (10 to 45sec.) and then just after the first ring of the second call, the call will be answered

Factory default setting: 9045 – answers after 25sec. (about 5 rings)

5.11. The simulated phone line function

This sequence defines the function of the phone connected to the simulated telephone line (if used).

98 y

where	Function
y = 0	**phone line** –for making phone calls. If the # key is pressed when the receiver is picked up, the phone will work as an alarm system keypad
y = 1	the phone works as a **system keypad**, it is impossible to make phone calls
y = 2	the telephone line is **disabled**
y = 3	**emergency call** –automatically calls a pre-programmed number (see 5.12), just after the receiver is picked up. Pressing the ∗ key within 2 sec. after having picked up the receiver will switch to a dial tone and will allow the user to make phone calls

Note: while the communicator is occupied with reporting events, or it is not registered to the GSM network, a busy signal is heard on the connected phone.

Factory default setting: y = 0 = phone line

5.11.1. Using an SMS phone connected to the simulated line

A phone capable of **sending and receiving SMS messages by CLIP** protocol can be connected to the simulated phone line. In the phone, both the **TX and RX numbers** should be programmed to **1111**.

If an **SMS** message is sent from this phone **to** the phone number "**001**" it will go directly to the communicator (free of charge). This can be used to send instructions to the system (e.g. text programming etc.).

If the communicator is programmed **to report to phone number 001** the **reports** will be sent **to the attached phone** via the simulated line (free of charge).

If the attached phone **provides caller identification (CLIP), then** the caller's phone number will be shown on the display.

5.12. Emergency telephone number

If the simulated phone line is set to emergency call mode (see 5.11), then after picking up the receiver the phone will automatically call a number programmed by:

952 xx...x ∗0

where:

xxx…x is a phone number (max. 20 digits), keying in ∗9 will enter "+" for international calls

To erase the number enter 952∗0

Factory default setting: the emergency number is erased

5.13. GSM signal dropout indication

This selectable feature monitors connectivity with the GSM network. If enabled, it indicates problems and generates an external communication fault report if there is a GSM signal dropout longer than 15 minutes.

9210	disabled
9211	enabled

Factory default setting: disabled

5.14. The microphone sensitivity of the phone

The sensitivity of the attached phone (or intercom) can be adjusted by:

953x where x can be from 1 to 9 (max.) – factory default = 5

5.15. The speaker loudness of the phone

The loudness of the attached phone (intercom) can be adjusted by:

954x where x can be from 1 to 9 (max.) – factory default = 5

5.16. Number to be called to maintain SIM card validity

If a prepaid SIM card is used and a lack of outgoing phone calls for a certain period cancels the validity of the SIM card, then this function offers the following: if there have been no outgoing phone calls within the last 90 days, then the communicator automatically calls the number programmed by this sequence, waits until the call is answered and then after 10 sec. automatically hangs up.

924 xx...x ∗0 where xx...x = phone number

Notes:
- *To erase this number enter 924 ∗0*
- *It is recommended to call cheap public services (e.g. weather forecasts etc.) but not toll-free numbers.*

Factory default setting: erased

5.17. Automatic SIM card credit interrogation

The communicator is capable of checking the credit balance of its SIM card by interrogating the GSM network with an SMS containing a recognized instruction string (if the network supports this feature). There are two options: The credit balance can be checked when the user requests it by sending an SMS instruction to the communicator, or the communicator can be set to check it regularly itself. To configure credit balance checking send an SMS in the format:

code_CREDIT_uu..u_xx_yyy_zz

where:

code	valid master or service code (e.g. 8080 or 1234)
_	**space**
uu..u	instruction recognized by the GSM network to check the balance (e.g. ∗101# etc.)
xx	automatic checking period in days
yyy	minimum acceptable credit balance
zz	the textual position in which the number showing the balance starts in the reply message from the GSM provider

In addition, a new way of SIM card balance checking is now available for networks which do not support standard balance checking but provide SMS reporting after each charged transaction. In this case you can configure credit interrogation by sending the following SMS:

code_CREDIT_S_xx

where:

code	is a valid master or service code (e.g. 8080 or 1234)
_	is a space
S	is literally S or s (a distinguishing mark)
xx	automatic checking period in days (optional)

Simultaneously, it is necessary to <u>disable</u> SMS forwarding and to configure the number used to maintain SIM card validity (the SIM validity-maintenance call number).
After performing the configuration you can check the balance anytime by sending the CREDIT instruction. By specifying the xx part you also request the checking to be performed automatically. On each check, the communicator performs a charged call (to the **SIM validity-maintenance** call number), and enables the forwarding of a single SMS from the network operator to the first pre-programmed number.

Notes:
- If the reported credit balance is lower than the set limit (yyy), the credit balance message from the provider will be forwarded to phone numbers M1 and M8 to remind someone to top up the SIM card.
- If event 22 is programmed to be reported to any tel. numbers (M1 to M8) then the message "Discharged battery of the communicator" will be sent to these numbers if the credit balance is under the yyy limit.

The telephone numbers M1 and M8 will also receive the GSM provider's replay.

- If only uu..u follows the CREDIT instruction (no xx yyy zz) then periodic balance checking will not be performed, but the balance will be checked immediately and the uu..u checking instruction will be memorized, so that in future it will be possible to check the balance just by sending the instruction code CREDIT.

*Example: sending the SMS instruction "**code credit ∗101# 7 50 1**" causes the credit balance to be checked every 7th day (after the SMS has been sent) and if the balance (starting with the first character in the message from the GSM provider) is lower than 50 currency units it will be reported.*

Warning: **the use of prepaid cards in the communicator is risky**. Some GSM providers block cards with enough credit but which are not topped up frequently enough. **We strongly advise the use of tariffed SIM cards !!!**

5.18. Remote programming by the SMS instruction

Instruction **PRG** can be used to send programming and operating sequences to the alarm system:

code_PRG_seq,seq,seq...

where:
  code is valid access or service code (e.g. 8080 or 1234)
  _ space
  seq programming sequence usually set via the keypad

Note:
- In the sequence can be used characters 0 to 9, ∗ and #)
- When the valid instruction is received, communicator simulates entering the keys on the keypad, comma in the SMS is taken as a pause in the sequence entering
- System must be unset and switched to the service mode
- The number of sequences in one SMS is limited by the maximum size of the SMS in the GSM network.

*Example: by sending SMS **8080 PRG ∗08080,201,#** the exit delay will be set to 10s*

5.19. Registration code for www.GSMLink.cz

If remote access via the Internet is desired, then the system has to be registered on the web page: www.GSMLink.cz
Each communicator has its own unique registration code, which is printed on the label attached to the communicator module. This code can also be sent by SMS to your mobile phone by the keypad entry:

 910 xx...x ∗0 where xx...x is the tel. number to send the code to

Notes:
- *It takes a certain time to receive the registration code (depends on the current traffic in the network)*
- *The registration code has the format:* xxxxx-xxxxx-xxxx

5.20. Triggering re-registration to the GSM network

After **923** has been entered, the communicator quits the GSM network and then re-registers itself. This re-registration does not change any settings in the communicator. It should be used after GSM network faults or data collisions and in some networks it also has to be used after a blocked SIM card has been unblocked by the GSM provider.
It is also possible (if the SIM card can still receive) to trigger GSM network re-registration **by sending the SMS instruction**: **code GSM** (code = master, user or service code).

5.21. Communicator reset

Entering **98080** returns the communicator to its factory default settings and texts, erases all telephone numbers and disables reporting. The text will not be changed.

5.22. Memorizing the SIM card's PIN code in the communicator

It is recommended to use a SIM card with disabled PIN protection. If it is impossible to disable the PIN, then it can still be used by entering the following sequence (it must be entered after the control panel has been powered up).

920 PIN ∗0

*Example: if the SIM card PIN is 1234 enter **9201234∗0***

Notes:
- If the communicator does not register to the GSM network within 1 minute of the PIN being entered (this problem is shown by red

LED flashes), then you either entered a wrong PIN or the GSM signal is too weak. In such a case:
  - o enter 920∗0 while in service mode (erases the entered PIN)
  - o disconnect the control panel power (mains and battery)
  - o take out the SIM card and try it in a mobile phone (it should register to a GSM network when located at the control panel)
  - o if you know the right PIN code and there is a GSM signal strong enough, put the SIM card back into the communicator, turn on the control panel power and then enter the PIN code (920 PIN ∗0) – the communicator should then register to the GSM network (its red LED should turn off within a minute)
- The communicator memorizes the PIN and it will use it automatically whenever it registers to the GSM network.
- If you are replacing the SIM card in the communicator with another one and the former one used a PIN code, first switch the control panel to service mode and enter **920∗0** to erase the former PIN code. The SIM card can then be changed.

Note: The PIN code cannot be changed if the ARC settings are locked

Factory default setting: The PIN code is erased

5.23. GPRS log-in parameters

GPRS data communication (wireless Internet via a GSM network) is used for remote access via the Internet and also for IP reporting to the ARC. To use GPRS data it must first be enabled (activated) in the SIM card (contact your GSM provider for details). Then the GSM network's GPRS parameters must be programmed by sending the following SMS instruction to the communicator.

code_GPRS_ x..x,y..y,z..z

where:
  code is a valid (master, user or service) access code (e.g. 8080 or 1234)
  _ space
  x..x APN (Access Point Name)
  , comma
  y..y username (do not enter if not required)
  z..z password (do not enter if not required)

Notes:
- Most public GSM networks only request an APN (do not enter y..y and z..z parameters in this case)
- The GPRS parameters can only be programmed if the system is in service mode and the ARC settings are not locked

Factory default setting: APN = Internet

5.24. ARC phone numbers / IP addresses

Events can be reported to up to 2 ARCs (which can be independent or ARC2 can work as ARC1's backup). Each ARC can have its main and backup phone numbers (or IP addresses) programmed with:

Main: **01 a xx....x ∗0**
Backup: **02 a xx....x ∗0**

where:
  a 1=ARC1, 2=ARC2
  xxx...x **tel. number** (max. 20 digits)
    or IP address and port – entry format example:
    01 2 ∗8 192 168 001 123 08080 ∗0
    where ∗8 (auto-converts to #) signifies an IP address which must have 12 digits and must be followed by the 5 digits of the port number (no separators)

To erase a tel. number / IP address enter: **01p∗0 or 02p∗0**
If numbers / IP addresses are erased there will be no reporting to that particular ARC

Note: the communicator first tries to send data to the main number / address, if it is not successful it tries the backup.

Factory default setting: all tel. numbers / IP addresses erased

5.25. Installation (alarm system) ID for ARC use

The installation's ID number which is sent to an ARC with every report can be programmed with:

03 a zz..z ∗0

where:
  a 1=ARC1, 2=ARC2

zz..z   installation ID number, max. 8 characters (0 to 9 and
∗1=A to ∗6=F - hexadecimal number)

Factory default setting: 0000 for both ARCs

5.26. Selecting the ARC communication protocol

To select the required communication protocol enter:

04 a x

where:

   a   1=ARC1, 2=ARC2
   x   0=Contact ID, 1=SMS CID, 2=IP CID

Notes:

- **IP CID is the fastest** of the above protocols and it also allows **very frequent checking of communication reliability** with the ARC (e.g. every 5 minutes)
- Contact ID protocol can be used with ARCs linked by standard telephone lines (if they support Contact ID)
- If your ARC does not allow SMS CID or IP CID protocols, please contact a Jablotron distributor for details on how to update your ARC.

Factory default setting: Contact ID for both ARCs

5.27. Selection of events to report to ARCs

The system recognizes 32 different types of events - see the following table. This sequence allows you to select which events are reported to which ARC.

05 a ec x

where **a**   1 = ARC1, 2 = ARC2
      ec   event code 01 to 32
      x   0 = no report, 1 = report

Factory default setting: all events are reported

ec	Event
01	Intruder alarm - instant
02	Intruder alarm - delayed
03	Fire alarm
04	Panic alarm
05	Number of permitted incorrect code-entries exceeded
06	Alarm triggered during control panel power-up
07	Tamper alarm
08	End of tamper alarm
09	End of alarm indication
10	Alarm cancelled by user
11	Setting
12	Unsetting
13	Partial setting
14	Codeless setting
15	External communication fault
16	External communication restored
17	Fault
18	Fault no longer present
19	Mains dropout longer than 30 minutes
20	Mains dropout
21	Mains restored
22	Discharged battery
23	Battery OK
24	Switching to Service Mode
25	Leaving Service Mode
26	PGX ON/OFF
27	PGY ON/OFF
28	Radio communication jamming present
29	Internal communication fault
30	Internal communication restored
31	Communication test
32	Unconfirmed alarm

Besides the events listed above, the communicator also reports some events which are not selectable here (e.g. the annual inspection request if enabled in the control panel = CID 1393)

5.28. Defining the delay before data is resent to an ARC

The communicator tries to send reports to the main number / IP address, and if unsuccessful it then tries the backup number / IP address. If still unsuccessful, it then tries to re-send the data to both the ARCs again as before, but after a period defined by:

06 a x
   where
      a   1 = ARC1, 2 = ARC2
      t   is the period: 0=immediately, 1 to 9 = 1 to 9 minutes

Factory default setting: 1 min. for both ARCs

5.29. ARC communication checking period

The time to wait after the last report sent to an ARC before performing an ARC communication check is set by this sequence. The communication-checking event code is 31 (see 5.27). This sequence programs how often the communication check is performed:

07 a hhmm
   where
      a   1 = ARC1, 2 = ARC2
      hh   hours
      mm   minutes

Notes:

- Checking reports are not sent in service mode
- IP CID protocol allows **very frequent checking of ARC communication** (e.g. every 5 minutes).

Factory default setting:24 hours after the last report – for both ARCs

5.30. Enable ARC reporting (ARC2 backs up ARC1)

This sequence allows reporting to ARCs to be switched on/off and also enables ARC2 to backup ARC1:

00 a x
   where
      a   1=ARC1, 2=ARC2
      x   0=off, 1=on, 2= ARC2 backs up ARC1 (2 can only be entered for ARC2)

Note: if ARC2 backs up ARC1 then it will only receive data if it is not possible to deliver it to ARC1. A report containing "Communication fault to ARC1" is then sent to ARC2 together with the first report to ARC2.

Factory default setting: both ARCs = off

5.31. Recording reports sent to ARCs in the control panel memory

This sequence enables the recording of every report successfully communicated to ARCs in the control panel's internal memory.

   080 enabled
   081 disabled

Note: it is recommended not to record reports sent to ARCs but to enable the indication of ARC communication faults (see 5.32). This saves a significant amount of control panel memory. The system initially assumes that every report is successfully delivered to ARCs, but if a report is not successfully delivered within 110 seconds of transmission, then a communication fault will be indicated and recorded.

Factory default setting: enabled

5.32. Indicate an ARC communication fault if a report is not successfully received within 110 sec of transmission

Enables the indication and recording of a communication fault if a report is not successfully delivered to an ARC within 110 seconds of its transmission.

   090 communication faults not indicated
   091 communication faults indicated

Notes:

- The communicator continues trying to send information to an ARC even after a communication fault has been indicated (after the data has been delivered, communication fault indication stops).
- For communication-checking reports the delivery time limit (confirmation from the ARC) is 300 minutes. But if any other report is sent to the ARC it must be confirmed within 110 seconds (otherwise a communication fault will be indicated)

Factory default setting: communication faults not indicated

5.33. IP address for data transmission

The communicator supports transmission of special data (e.g. visual information) from the system to the set IP address, which can be set by the following sequence:

013 *8 xxx xxx xxx xxx yyyyy *0

where: concerning ∗8, insert these characters, to identify the following IP address which must consist of 12 digits followed by 5 digits for the port (see below)

xx..x is the 12 digit IP address

y..y is 5 digits for the port (see manual of the communicator).

Example: 013 ∗8 195 039 077 154 07070 ∗0

To erase the IP set **013∗0**.

Note: if no devices supporting this feature are in the system, do not set the IP address.

Factory default :   77.104.220.129 7070 (img.jablotron.com)

5.34. Locking the ARC settings

All settings which effect reporting to ARCs can be locked by a digital code:

901 xx..x ∗0   **where** xx..x is an installer-defined locking code (4 to 8 digits)

Notes:

- Exiting service mode after the locking code has been entered will lock all the settings effecting ARC communication (see the sequence list in section 5).
- If ARC programming is locked, then it can be **temporally enabled** in service mode by entering **901 xx..x ∗0**   where xx..x is the locking code. It will then relock on exiting service mode.
- The ARC settings can be **permanently unlocked** by entering 901∗0 while ARC programming is temporally enabled – see above. This will erase the locking code.

*Factory default setting***:** *ARC settings unlocked*

5.35. Engineer reset supported

Starting from this version the communicator firmware supports the Engineer reset feature (also requires the control panel firmware to be of version KE60108 or higher). This feature is designed for ARC (Alarm Receiving Centre) connection to satisfy the following requirements of the DD243 standard: After a confirmed alarm has been triggered, the control panel must switch to a disabled state. Switching to normal operation is then only possible using a valid ARC access code. **Until then, the system remains completely disabled – no operation or programming is possible even when in Maintenance or Service mode.**

An ARC access code can be entered in the following ways:

GSMlink   in the field used for remote code entry
SMS instruction   *ARC-code_instruction

(e.g. *12345678 STATUS)

6. GPRS modem feature

The communicator can be used as a GPRS modem to connect a PC to the Internet. A suitable cable is provided with the communicator. The cable should connect a PC's serial COM port to thae data connector on the communicator board (the cable length must not be extended). It is also necessary to install the driver in the PC, which is found on the CD ROM provided with the communicator. The SIM card used in the communicator must be GPRS-enabled and the GPRS parameters must be programmed in the communicator too (see 5.23). When the communicator's GPRS modem function is used:

- It is possible to make phone calls, but the internet data transfer rate will drop to zero during phone calls
- Incoming SMS messages are stored and are processed after GPRS data transfer has been terminated.
- GPRS data transfer is terminated if the communicator is due to report alarms or setting/unsetting (by SMS or by phone call).

7. Further guidance on the communicator

7.1. How the communicator sends reports

If there is a need to report an event (e.g. an alarm) then the communicator:

- sends data to ARC1, if used (the communicator tries the main phone number / IP address, if unsuccessful then it tries the backup number / IP address).
- Then it sends data to ARC2 in the same way if programmed as an independent ARC. If ARC2 is programmed as the backup to ARC1 then the data will only be sent to it if transfer to ARC1 has been unsuccessful.
- Then the unit sends SMS reports (1st tel. number, 2nd tel. number ….8th tel. number)
- Then the unit performs reporting by phone call (1st tel. number, 2nd tel. number ….8th tel. number) – each programmed number is called once whether the call has been answered or not
- If all previous attempts to send data to ARCs have been unsuccessful, the next attempts occur after the programmed repeat period (see 5.28).

If an alarm is cancelled by a user while it is being reported, any unsent SMSes and unperformed call reports are cancelled, but the ARC still gets a complete set of reports about events in the system.

7.2. The communicator's LED

The red LED on the communicator board indicates as follows:

- regular flashing – not registered to a GSM network
- lit permanently – communication in progress (registration to a GSM network, an SMS transfer or a phone call)
- 3 flashes – pause – 3 flashes… - GPRS modem mode

7.3. After entering service mode the communicator:

- finishes reporting to ARCs (if any is needed) and confirms successful data transmission by a short ring from the phone connected to the simulated tel. line
- unfinished SMS and call reports are cancelled
- unsent ARC reports are only erased if ARC tel. numbers / IP addresses or the ARC communication format or the installation ID are changed
- alarm restoration reports or fault restoration reports are sent to the ARC even in service mode
- changes to communicator settings do not take effect until service mode has been exited

7.4. Configuring the communicator in maintenance mode

If configuring the communicator in maintenance mode is enabled (via control panel programming), then the above described programming sequences can be used to set:

- tel. numbers M1 to M7
- the events reported by SMS and phone calls
- GSM signal strength measurement
- simulated phone line functionality
- the digits of the emergency tel. number

7.5. Remote access by Internet

The system can be accessed remotely via www.GSMLink.cz which allows complete programming by installers and also operating the system by end users. To access the system remotely it is necessary to:

- Use a SIM card enabled for GPRS data transfer
- Program the communicator GPRS parameters (APN) – also possible via www.GSMLink.cz
- Register the communicator via the GSMLink web page by:
  - o displaying www.GSMLink.cz and selecting New registration
  - o setting your login details (name and password)
  - o entering the communicator registration code (see 5.19)
  - o entering the communicator SIM card tel. number
  - o entering your system access code (user or service – this gives you access to the user menu or the installer menu accordingly)
  - o after entering the above parameters it should be possible to establish a connection with the system (connecting takes time depending on network traffic, typically within 2 minutes).
- for further access sessions you only need to enter your login details (these can be memorized by your web browser)
- several people can register for internet access to the system (both installers and users)

- A service technician needs only one set of login details to access various installations. After the first system has been registered, the installer can add (or remove) other installations to(or from) his/her GSMLink account.

- there is a demo version of remote access on www.GSMLink.cz

- using www.GSMLink.cz is free of charge

7.6. A complete list of CID reports to ARCs

A report to an ARC consists of: installation ID, event code, subsystem number and the number of the source (device or code). In IP CID and SMS CID, in addition to this, a time stamp is also sent as follows.

List of the CID reports

CID code	Event	ec
1130 / 3130	Intruder alarm – instant / restored	1 / 9
1134 / 3134	Intruder alarm – delayed / restored	2 / 9
1110 / 3110	Fire alarm / restored	3 / 9
1120 / 3120	Panic alarm / restored	4 / 9
1461 / 3461	Number of incorrect code-entries exceeded alarm / restored	5 / 9
1140 / 3140	Alarm triggered during control panel power-up / restored	6 / 9
1137 / 3137	Tamper alarm / no tampering	7 / 8
1144 / 3144	Device tamper alarm / no tampering	7 / 8
1406	Alarm cancelled by user	10
1401 / 3401	Unsetting / setting	12 / 11
3402	Partial setting	13
3408	Codeless complete setting	14
1354 / 3354	External communication fault / restored	15 / 16
1300 / 3300	Fault (except device) / all faults restored	17 / 18
1330 / 3330	Device fault / all faults restored	17 / 18
1301 / 3301	Mains dropout longer than 30 minutes / restored	19, 20 / 21
1302 / 3302	Battery fault (except devices) / all battery faults restored	22 / 23
1384 / 3384	Device battery fault / all battery faults restored	22 / 23
1306 / 3306	Switching to Service Mode / Leaving Service mode	24 / 25
1661 / 3661	PGX ON/OFF	26
1662 / 3662	PGY ON/OFF	27
1355	Radio communication jamming present	28
1350 / 3350	Internal communication fault / restored	29 / 30
1602	Communication test	31
1138	Unconfirmed alarm	32
1351	Communication fault to ARC1	to ARC2 if backups
1393	Annual check request	17
1551 / 3551	Communicator blocked / restored	31 only in IP CID

List of source numbers

Source number	Source
701	Control panel
731	Communicator
741	Wired keypad
001 - 050	Devices 01 - 50
500	Master code
599	Service code
501 - 550	Codes 01 - 50

Subsystem: 01 in all reports
In a split system, for setting and unsetting: 02 = A, 03 = B
For partial setting: 02 = A, 03 = AB

8. Technical specifications

Power   12V DC (from the control panel)
Stand-by consumption   about 35 mA (depends on the GSM signal)
Max. consumption (during communication)   1 A
GSM band   E-GSM / GPRS 900/1800MHz
RF output power   2 W for GSM900, 1 W for GSM1800
AUX output   dry NC contact, max. 60 VDC / 100 mA

Complies with   EN 50131-1, EN 50136-2-1, as:
      ATS4, ATS 5 if CID protocol is used and the repeating period is set to zero (sequence 06a0)
Security grade   2
Operating environment (–10 to 40°C)   class II
Safety   EN 60950-1
EMC   ETSI EN 301489-1, ETSI EN 301489-7
              EN 55022, EN 50130-4
Radio transmissions   ETSI EN 301419-1 and EN 301511
CLIP protocol (caller ID + SMS) ETSI EN 300 089 V3.1.1(2000-12)
Can be operated according to: ERC/DEC 98(20,21)

Jablotron Ltd. hereby declares that the JA-80Y is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The original of the conformity assessment can be found at www.jablotron.com, - Technical Support section

Note: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use.