

# Manual

RUKRA REMOTE GSM DOOR INTERCOM\_ENG **ARTICLENUMBER: RK-3015** 





#### **Basic features:**

GSM Door Intercom is usefull for different installation.

You just insert SIM card and connect power supply, eventually connect el.lock. For its operation is used GSM network – so you dont need any telephone line or other cables.

- Model with 1 or 2 buttons. Under each button you can programm up to 7 phone numbers which are after button press progressivelly dialled.
- Automatic regulation of microphone volume.
- 2 independent, remotely controlled switching relays with different ways of activation (activation by ringing or by code during call, by button press, etc...)
- Recording of numbers from which you activated the relay by ringing
- 1 input for connection for example alarm (alerting by SMS) or for control of gate(door) opening (beeps during call) etc..
- Voice signalling of different events (for example. ", wait please", "Open", etc...

#### **Functions:**

Hands free GSM phone with preprogrammed phone numbers for 1 or 2 buttons with name cards:

- 1. **Outgoing call:** After button press is dialled first number from saved list of numbers. The numbers are saved under names ABUTTON1 to ABUTTON7 it means first number under name ABUTTON1. When called party is busy or not available then automatically second number under name ABUTTON2 is dialled etc.. When called party picks up the call the connection is established and next numbers are not dial (the same valid for second button and line BBUTTON).
- 2. **Incoming call:** up settings will be incoming call picked up either for all calls or for saved numbers on SIM card only. (connection for saved numbers only). GDI might also reject incoming calls (see later in relay function). Before picks up might GDI alert by preprogrammed melody (adjustable). (Notification for call establishing listen in control).

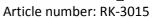
Remotely controlled switching relay. Each can be controlled up settings by different ways:

- 1. **By ringing** incoming call is rejected (confirmation of command accept) and simoultaneously is activated selected relay for preprogrammed time. Selected relay can be activated:
  - a. only from numbers saved in the phone list of the SIM card, or
  - b. from any number .
- 2. **By code** during voice communication (incoming as same as outgoing call) . The 1 digit code by DTMF might be dialled by called party for relay activation (for preprogrammed time). For each relay you can programm different code.
- 3. **By SMS** you can remotely switch ON/OFF selected relay or activate relay for certain time mention in SMS. Relays might be controlled only from preprogrammed numbers at GDI SIM.
- 4. camera mode selected relay is ON by picking up the call and it is OFF by hanging up the call.
- 5. **lighting mode** selected relay is ON by picking up the call and it stays ON for preprogrammed time after hang up.
- 6. **button mode** selected relay is ON after button press and stays ON for preprogrammed time.

#### Adjustable input :

- 1. **SMS sending** "ALARM ON" to preprogrammed number when input is short circuit against ground. SMS "ALARM OFF" to next preprogrammed number when input is disconnected. It might be programmed 1 number only (ON/OFF). Then is send 1 SMS only up selected status.
- 2. **opening detection**. When input is activated during call (for example by gate (door) opening) the GDI generates into a call 3 short beeps for time of input activation.

**Voice signalling of different status**. Up settings might be different status signalling by voice . (language adjustable). When is voice signalling presented during a call it is hearable on both sides of connection (for example "open")

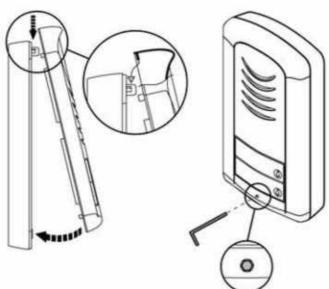




**Detection of start / restart**. GDI indicates the start device (power) switch relay1 on 7s. This function can be used for example to automatically open after restoration of power supply, remote reboot any device (ringing) with automatic restart after power is restored, etc.

#### Installation

## Assembly of front panel



**CAUTION!** During assembly of front panel zou might connect/disconnect speaker connector (via schematics)

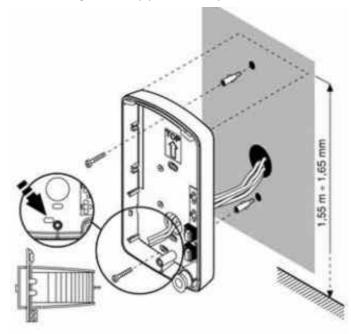
## Assembly of cards backlighting



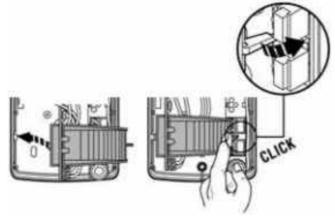


#### **GDI Wall mounting**

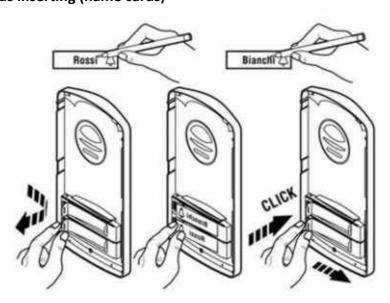
Wall mounting assembly you make by attached screws (5mm).



Replacing backlighting cards after wall mounting



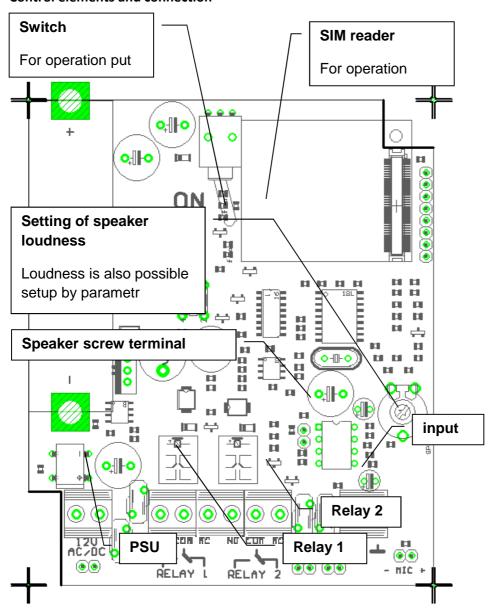
# Cards inserting (name cards)



Every button has individual card hold by plastic flag. (via picture).

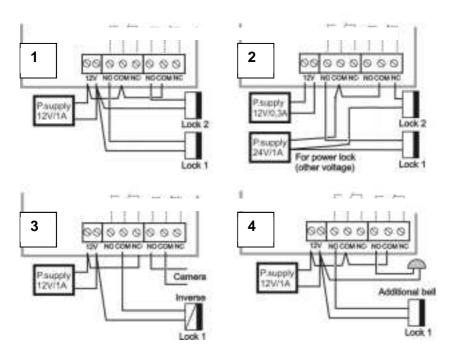


#### **Control elements and connection**



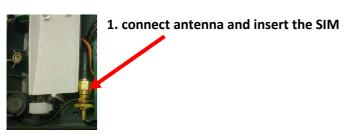
#### **Examples of relay connection**

- 1. Basic connection 2 electrical locks and possibility control 2 doors (gates)
- 2. 2x PSU possibility to use 2x independent PSU. One for GDI and second for electrical locks. The electrical lock 2 is connected inversaly (fire emergency doors).
- 3. External camera or lighting activation.
- 4. Electrical lock and additional bell combination.



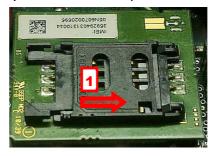
**CAUTION!** Relay contacts cant close 230V directly. To control directly 230V devices you must use contactor.



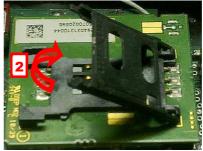


We recommend use SIM without PIN. When you need PIN setup PIN 1234.

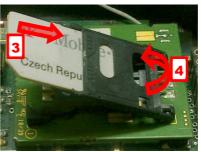
Release the SIM holder (1).



Move it up (2).



Insert the SIM in correct position (3) to the holder. Close the SIM holder (4).



Pull the SIM holder for lock up (5)



Note: All programmed parametres are saved on the SIM. The SIM you can insert into GDI already preprogrammed or setup GDI after switching ON (via bellow).

When you want use calls rejection (ringing), ask your GSM provider to switch OFF voice mail at used SIM card!



#### SIM preprogramming

- 1. SIM which you desire to use insert to various mobile phone.
- 2. When PIN is setup cancel it (or setup PIN to 1234)
- 3. When you will want to make remote setting save on the SIM phone number of desired mobile under name ADMIN1.
- 4. On the SIM save phone number which should be dial after pressing button 1 (A), under name "ABUTTON1".
- 5. When you have GDI with 2 numbers save on the SIM also phone number which will be dial after pressing button 2 (B), under name "BBUTTON1".
- 6. When you want dial automatically next numbers ( when first number is busy or not available) then save those numbers under appropriate names ABUTTON2..7 and BBUTTON2..7
- 7. Similiary you can programm setting of all parametres (programming table at the end of manual)

The way of phone numbers saving on the SIM depends on mobile phone type. Please double check that you save numbers to SIM card and not to internal mobile phone memory!

#### Switch on GDI

- When all neccessary cables are connected (relay, locks, etc.) CAUTION: antenna must be
  also connected. Then connect speaker connector and connect PSU. The RED LED lights
  on and after a while yellow LED start flashing (via table). The GDI signalling by tones or
  by voice SIM reading, GSM network registration and ready for operation (via table).
  Now you can put on front panel of GDI but dont screw it.
- 2. When SIM is preprogrammed you can try first connection push the button. The GDI must dial programmed phone number. When SIM is not preprogrammed then first step is SIM programming (via following article (3)) and then try connection. After voice connection you can adjust setting of speaker volume. Then screw up front panel of GDI.



#### 3. Programm GDI parametres

The parametres in GDI (must be switch on) you can programm by 2 ways. By SMS or by PC (special sw) via USB port.

#### A) Programming by SMS.

Due security reasons you can programm GDI parametres from authorised numbers only. They are saved on SIM under names ADMIN1 to ADMIN9.

#### SMS are always written by BIG LETTERS

Each SMS elements are splited by space (words). First word is always command. Further word (s) is one or more parametres.

Example: INIT ADMIN1 +420123456789

All commands are in appropriate table at the end of manual

- During first setting when SIM doesnt contents any ADMINx name is neccessary such number insert to SIM by SMS with command INIT. SMS you can send from various number. When SIM already contents even one number under name ADMINx the command is ignored.
- 2. When you need control relay eventually setup GDI from next ADMIN numbers perform following: from mobile phone with ADMINx number send progressivelly SMS to GDI with numbers of next ADMINx in SMS format: WRITE ADMIN2 +420xxxxxxxxx (WRITE ADMIN3... etc.)
- 3. From mobile phone with numbers ADMINx send progressively SMS to GDI with numbers which should be dial after button press, SMS format: WRITE ABUTTON1 +420xxxxxxxxx (WRITE BBUTTON1... etc..)
- 4. Up your needs send next SMS with other parametres for opening by ringing, SMS alarm sending, etc..
- 5. Setup parametres GDI (via table). Parametres you can setup individually for each parametr appropriate SMS. When you need setup more parametres simoultaneously we recommend use SMS for batch setting. By SMS "READ PAR" read firstly current setting to your mobile.

By editor of SMS messages change at received SMS word READ to WRITE as same as adjust parametres up your needs. Such adjusted SMS send back to GDI as reply. The parametres will be setup.



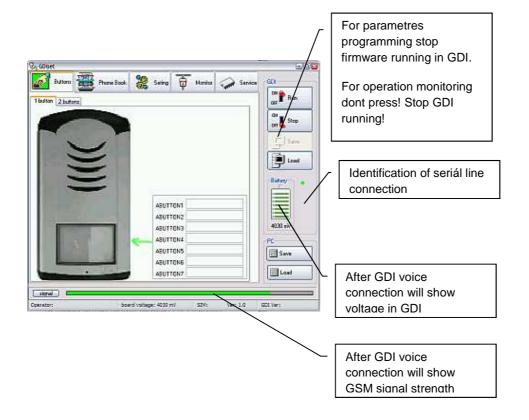
## A) Setting by PC through USB via GDIset (optional)

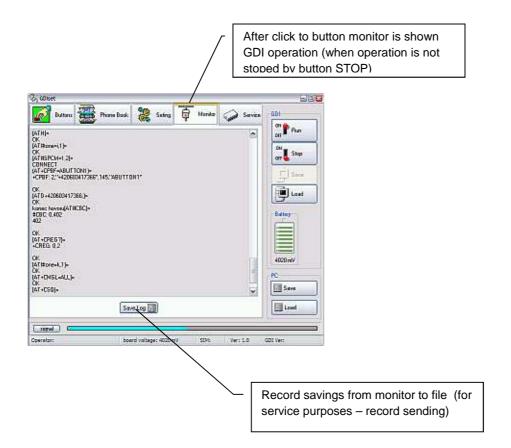
1. Connect MiniUSB cable to PC as same as to programming module – green LED must light on at the module. During first usage USB driver might be installed. USB driver is available at attached CD.



- Remove front cover of GDI and insert connector of programing modul into GDI (via picture). On programming modul must light on red LED (It is flashing same way like yellow LED on GDI)
- 3. Run GDIset programm and setup appropriate port.
- 4. Program control GDI connection. After that display GSM signal strength and voltage on GDI (back up ACU). Now you can programm:

#### **Monitor mode**

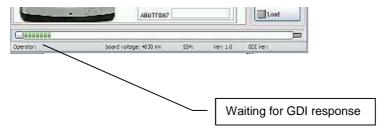






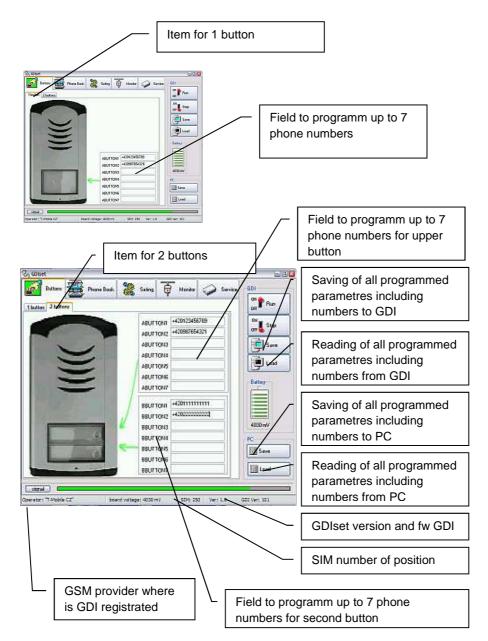
#### **Programming mode**

After button press STOP programm sends to GDI command for stop and wait for GDI response (via )



#### **Item Buttons**

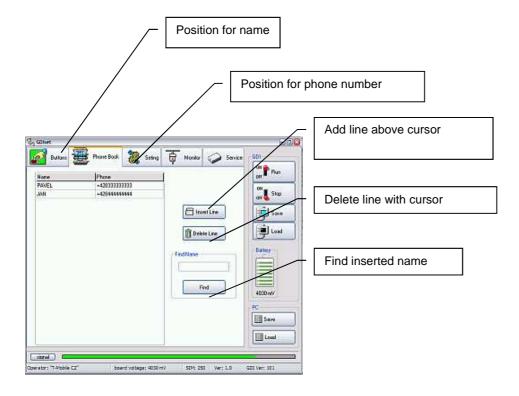
It is designed for programming phone numbers under each buttons

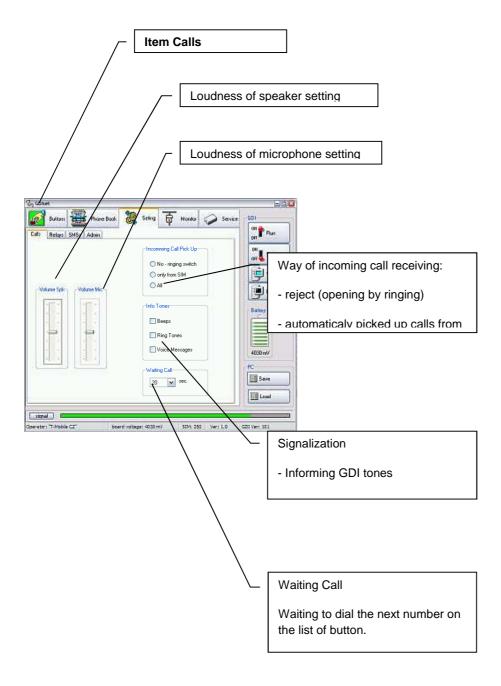




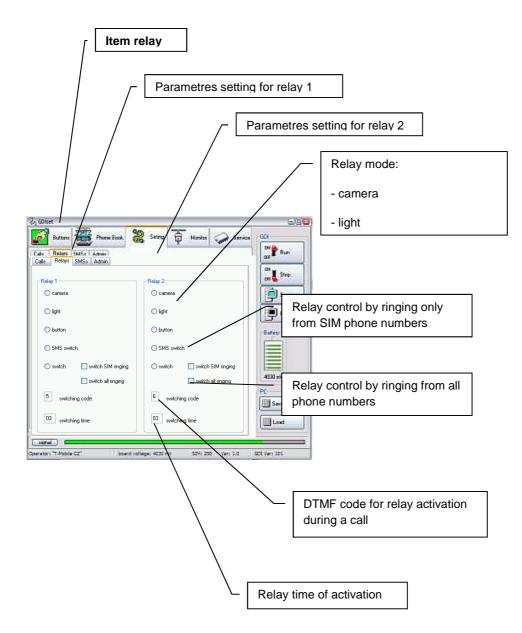
#### **Item Phone Book**

Phone book of authorised numbers for ringing opening as same as automatic call receiving.

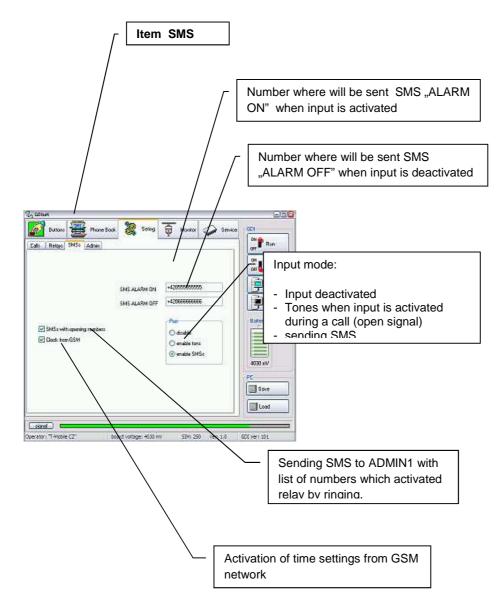




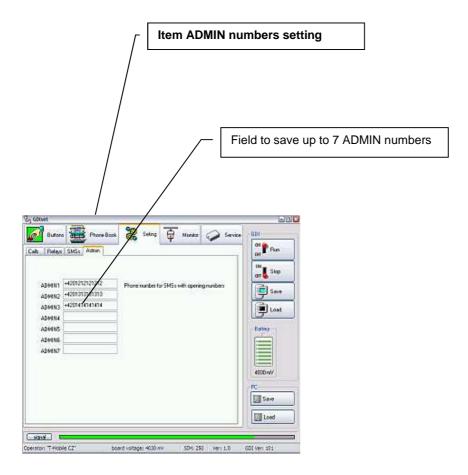










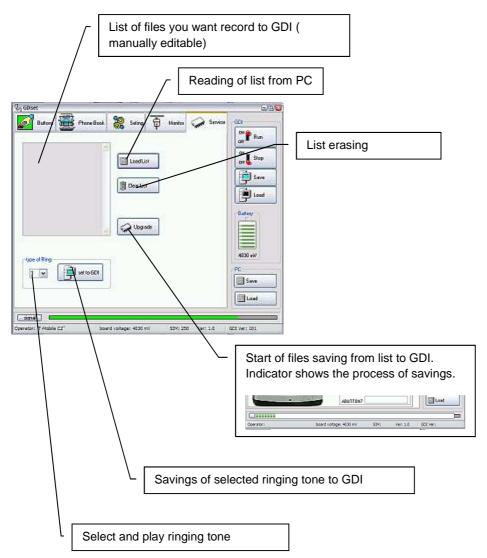




#### **Item Service**

It is designed for upgrade of firmware and voice messages in GDI.

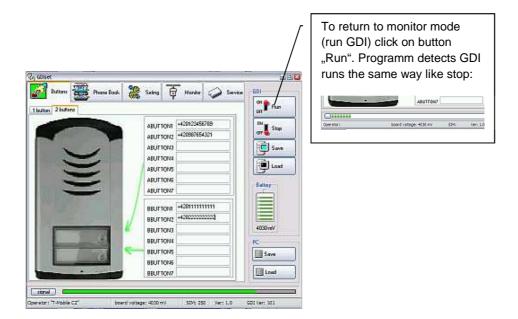
**CAUTION!** Unauthorised manipulation can blocked the unit.



When all neccessary is setup then save it by button Save to GDI.



## Return from programming mode to monitor mode (restart of GDI)



GDI behaviour after restart is the same like during power supply connection (tones, eventually voice messages).



## **Table of SMS commands**

cor	mmand ( SMS)	Functionality	De s
	READ STAT	Reading of GDI status (firmware, time,	
	DEAD DAD	relays status etc.)	
	READ PAR	Reading of all setup parametres	
	READ JMENO	Reading of phone number for NAME	
	CLR JMENO INIT ADMIN1 +420ccc	Erasing phone number for NAME	
	INTI ADMINI +420ccc	Inicialization – first GDI setting – parametres you can programm from	
		number ADMIN1 +420ccc	
	SET REL1 ON	Activation relay 1	
	SET REL1 OFF	Deactivation relay 1	
	SET REL1 ON xx	Activation relay1 for xx minutes (xx=00 -99)	
_	SET REL2 ON	Activation relay 2	
ľ	SET REL2 OFF	Deactivation relay 2	
SMS might be sent from ADMINx numbers only	SET REL2 ON xx	Activation relay 2 for xx minutes (xx=00 -99)	
ηp	WRITE NAME +420ccc	Saving of phone number under NAME	
שַׁר	WRITE PAR VOLIN:x	Saving of microphone loudness	4
×		[x=1-7]	
M	WRITE PAR VOLOUT:x	Saving of speaker loudness [x=1-7]	4
ΑD	WRITE PAR INCALL:x	Processing of incoming call: x:	0
Ε		0 – calls rejected (ringing in)	
fro		1- calls received from SIM only (list)	
r t	WRITE PAR WRCALL:x	2 – all calls received  Sending SMS with the numbers of	0
sel	WHILE I AIR WHOMEL.X	which was to open up	0
e		0 – deactivated	
<del>ا</del> ۲		1 - activated	
igi	WRITE PAR TMGSM:x	Time setup up GSM network x:	1
E S		0 – OFF 1 - ON	
Σ	WRITE PAR TONE:x	Setting of acoustic signalization x:	5
S		0 – switch OFF	"
		1 – signalling by service tones	
		2 – ringing of incoming call is ON	
		4 – signalling by voice messages and combination – for ex. 7 – all is ON	
	WRITE PAR INPMOD:x	Input mode	
	THE TAKE IN MOBIA	x=0 - deactivated	
		x=1 – beeps into call (opening	
		indication)	
		x=2 – during activation/deactivation	
	WRITE PAR WAIT:xx	sends SMS Waiting to dial the next number on the	20
		list	=0
		xx - 10 to 90 sec. (by dozens)	
×	WRITE PAR RL1COD:y	Code for relay1 activation during	5
		call	
SMS might be sent from ADMINX numbers only	WDITE DAD DI 4MOD	y= 0-9	4
<b>ا</b> ا	WRITE PAR RL1MOD:x	Relay 1 modes x=0 – control by SMS	1
o.		x=1 – switch mode (ringing in only from	
t fi		SIM phone number or by code)	
en		x=2 - camera mode (activated by pick	
e s		up, deactivated by hang up)	
a L		x=3 – lighting mode (activated by pick up and stays ON for "activation	
ghi s o		time" after hang up	
mi		x=4 – activated for "activation time"	
SMS mig numbers		after button press	
SIV		x=5 - switch mode all (ringing in from all	
		phone number or by code)	



WRITE PAR RL1TMON:y	Relay1 activation time after ringing in or by code yy seconds y=0-9	03
WRITE PAR RL1RING:x	Relay1 activation by ringing in x=0 – OFF x=1 - ON	1
WRITE PAR RL2COD:yy	Code for relay2 activation during call yy= 00-99	6
WRITE PAR RL2MOD:x	Relay 2 modes  x=0 - control by SMS  x=1 - switch mode (ringing in only from SIM phone number or by code)  x=2 - camera mode (activated by pick up, deactivated by hang up)  x=3 - lighting mode (activated by pick up and stays ON for "activation time" after hang up  x=4 - activated for "activation time" after button press  x=5 - switch mode all (ringing in from all phone number or by code)	0
WRITE PAR RL2TMON:yy	Relay2 activation time after ringing in or by code yy seconds yy=00-99	05
WRITE PAR RL2RING:x	Relay2 activation by ringing in x=0 – OFF x=1 - ON	0
WRITE ALARMON +420ccc	Savings of number for SMS "ALARM ON" (input grounding)	
WRITE ALARMOFF +420ccc	Savings of number for SMS "ALARM OFF" (input disconnection)	
CAL AT+CSQ	Signal strength level	
CAL AT+CPBR=x	Info about number saved on position x	
CAL AT+CCLK=" <time>"</time>	Setup time in GDI <time> Format <time>= yy/MM/dd,hh:mm:ss±zz yy – year (00-99) MM – month (01-12) dd – day (01-31) hh – hours (00-23) mm – minutes (00 – 59) ss – seconds (00 – 59) ±zz – time zone (-47+48) hours</time></time>	



#### **Command types:**

**READ** – command for reading parametres as same as phone numbers from SIM card

**CLR** – command to erase phone numbers from SIM card. **CAUTION!** When you use SMS for numbers erasing then dont forget that one ADMINx number must stayed – otherwise remote settings will not be possible (neccessary to make new initialization).

**INIT** – Initialization. During first setting when SIM doesnt includes any ADMINx number is neccessary to put such number on the SIM card. It is done by SMS with INIT command. The SMS might be sent from various number. When SIM card already has at least one number with name ADMINx the command is ignored.

WRITE – command to save parametres as same as phone numbers to SIM card

**CAL** – after command CAL you can put various AT command of used GSM module (for example: module reset, time setting etc.) . **Those commands please use with appropriate knowledge only! It can caused blocking of whole unit!** 



# Names function saved in phone book

	ion saved in phone book
NAME	function
ABUTTON1	- to this number GDI call when button is pressed (upper button)
	- relay1 or relay2 activated by ringing in
ADUTTONO	- calls are automatically received from this number
ABUTTON2	- to this number is called from GDI when number under
	ABUTTON1 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
ADUTTONO	- calls are automatically received from this number
ABUTTON3	- to this number is called from GDI when number under
	ABUTTON2 is busy, unreachable, not picked up a call for certain
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
ABUTTON4	- to this number is called from GDI when number under
ABUTTON4	ABUTTON3 is busy, unreachable, not picked up a call for
	certain
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
ABUTTON5	- to this number is called from GDI when number under
ABOTTONS	ABUTTON4 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
ABUTTON6	- to this number is called from GDI when number under
ABOTTONO	ABUTTON5 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
ABUTTON7	- to this number is called from GDI when number under
7.50110111	ABUTTON6 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
	·
BBUTTON1	- to this number GDI call when down button is pressed (version with
	2 buttons)
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
BBUTTON2	- to this number is called from GDI when number under
	BBUTTON1 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
BBUTTON3	- to this number is called from GDI when number under
	BBUTTON2 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
BBUTTON4	- to this number is called from GDI when number under
	BBUTTON3 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
BBUTTON5	- to this number is called from GDI when number under
223.10.10	BBUTTON4 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
BBUTTON6	- to this number is called from GDI when number under
סאוטווטטט	BBUTTON5 is busy, unreachable, not picked up a call for
	ר טבוב די טבוב



EUROPE	
	certain time
	- relay1 or relay2 activated by ringing in
	- calls are automatically received from this number
BBUTTON7	- to this number is called from GDI when number under
	BBUTTON6 is busy, unreachable, not picked up a call for
	certain time
	- relay1 or relay2 activated by ringing in
1514110	- calls are automatically received from this number
ADMIN2	- by ringing in activate relay 1 and relay 2
to	- Activate relay 1 and relay 2 by SMS - Read GDI status and numbers in phone book by SMS
ADMIN7	- Edit name and numbers on SIM card by SMS
	- Control next features by SMS ( AT commands)
	- Setup parametres by SMS
	- calls are automatically received from this number
ADMIN1	The same like ADMIN2 to ADMIN7 and moreover:
	- to this number are sending reports by SMS includes list of
	relay activation by ringing in
	- to this number is sending SMS with message abou low battery
	level (option)
Various	- relay1 or relay2 activated by ringing in
name	- calls are automatically received from this number
ALARMON	- to this number is send SMS "ALARM ON" when input is
	activated against ground
ALARMOFF	- to this number is send SMS "ALARM OFF" when input is
	deactivated
VER	- firmware version in GDI - just info - do not adjust!
PARGDI	- GDI parametres
	A#B#C#D#E#F#G#H (default 4#4#0#0#1#5#0#2)
	A – microphone sensitivity [1-7]
	B – speaker loudness [1-7]
	C – incoming calls: 0 – all rejected (ringing in relays activation)
	1 – accept from numbers on SIM card only
	2 – accept all
	D – record who opened by ringing in: 0 – deactivated
	1 – activated
	E – time setup from GSM network: 0 – deactivated
	1 – activated
	F – signalization: 0 – OFF
	1 – tones
	2 – ringing of incoming call
	4 – voice messages
	all combination available – for ex. All is ON = 7
	G – input mode: 0 – input deactivated
	1 – when input is grounded beeps into call
	(signalling of opened door)
	2 – SMS when input is activated/deactivated
	H - waiting to dial the next number on the list [1-9]
	value is in dozens seconds
PARRL1	- parametres for relay 1
	A#B#CC#D (default 5#1#03#1)
	A – DTMF code for relay activation during call [0-9]
	B – relay mode: 0 – SMS mode, control by SMS
	1 – switch mode, activated by ringing in from
	SIM phone numbers or by DTMF code during
	call
	2 – camera mode (activated by pick up, deactivated by hang up)
	3 – lighting mode (activated by pick up, stays
	activated for "activation time" after hang up
1	astrated for good valion time after harry up
	4 – button mode (activated foractivation time"
	4 – button mode (activated for "activation time" after button press
	4 – button mode (activated for "activation time" after button press 5 – switch mode all, activated by ringing in all



phone numbers or by DTMF code during call
CC – activation time [00-99]
D – relay activation by ringing in: 0 – deactivated
1 - activated
- parametres for relay 2
A#B#CC#D (default 6#0#05#0)
A – DTMF code for relay activation during call [0-9]
B – relay mode: 0 – SMS mode, control by SMS
<ul><li>1 – switch mode, activated by ringing in from</li></ul>
SIM phone numbers or by DTMF code during
call
2 – camera mode (activated by pick up,
deactivated by hang up)
3 – lighting mode (activated by pick up, stays
activated for "activation time" after hang up
4 – button mode (activated for "activation time"
after button press
5 – switch mode all, activated by ringing in all
phone numbers or by DTMF code during call
CC – activation time [00-99]
D – relay activation by ringing in: 0 – deactivated
1 - activated

Names with numbers might be saved to phone book also by various mobile phone. (follow instruction of mobile phone manual). Names ABUTONx, BBUTONx, ADMINx, ALARMON, ALARMOFF, PARGDI, PARRL1, PARRL2 must be written by big letters. Between names and numbers is not a space GDI response for SMS "READ STAT"

#### **READ STATUS:**

**VER: 101** 

BATTERY:4030mV

TIME: "00/01/01,00:01:55"

OPER: T-Mobile CZ

INP:1

RL1:0

RL1:0

GDI response for SMS "READ PAR"

**READ PAR:** 

VOLIN:4

VOLOUT:4

**INCALL:0** 

WRCALL:1

TMGSM:1





RUKRA EUROPE TONE:5	Article number: RK-3015
INPMOD:2	
WAIT:2	
RL1COD:5	
RL1MOD:4	
RL1TMON:03	
RL1RING:1	
RL2COD:6	
RL2MOD:1	
RL2TMON:05	
RL2RING:1	
SMS example for GDI parametres setting	
WRITE PAR:	
VOLIN:1	
TONE:7	
INPMOD:2	
RL1COD:2	



#### **GDI** tones

Except ordinary tones and signalling of GSM communication (ringing tone, busy tone, different provider's messages) the GDI has own signalling of operation (via setting possibilities).

High tone – Alerting GDI detects not registration to GSM net (antenna not conne cted , wrong PIN,), dialling number to GSM etc
Medium level tone – verify action GDI reads the SIM, registrate to network, answer for SMS, measure voltage etc
Low level tone — error GDI detects error (for example: low voltage, no GSM reaction for command. Can react by unit restart
High tone follow by medium level tones in period cca 5 sec. start a initialization of GDI (registration to network, SIM reading etc)
High tone repeated GDI detects disconnection from GSM net (antena disconnect ed, wrong PIN)
Medium level tone repeated during button holding, high tone Button press detection, dial of preprogrammed number
High tone, once after dial number to GSM called party reached

## **LED** signalling

Red LED	<del>+++++++++++++++++++++++++++++++++++++</del>	Permanent light ΓΔΙ ποωερ συππλψ ισ ΟΝ
		Not light ΓΔΙ σωιτχηεδ ΟΦΦ
		Not light ΓΔΙ σωιτχηεδ ΟΦΦ
		Flashing space and light same duration $\Gamma\Delta I \text{ is not registrated to } \Gamma\Sigma M \text{ network}$
Yellow LED		Short flashing with frequency 2 sec.
		$\Gamma\Delta I$ registrated to $\Gamma\Sigma M$ network
	\$	Permanent light ΓΔΙ εσταβλιση α χαλλ ορ ιτ ισ α χαλλ ο ρ ΓΔΙ ιν προγραμμιινγ μοδε



#### **GDI** with backup battery

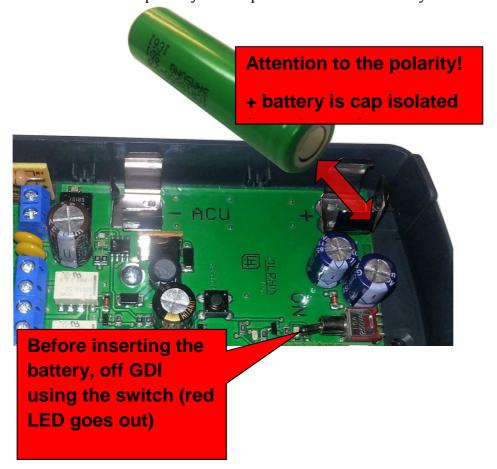
If you have already GDI with a backup battery in the delivery, pull out before operation insulating tape.

**Do not store the device with a battery pack without insulating tape!** Self-discharge can damage the battery, not covered by the manufacturer's warranty.

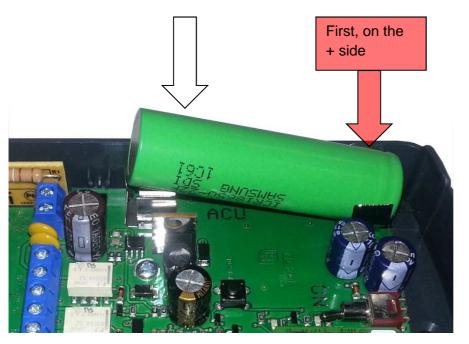


## Inserting the backup battery:

- Use only batteries approved by the manufacturer: Li-Ion 18650 2000-2600mAh
- Observe the polarity. Never place the inverted battery! It can damage the device.









Again turn on GDI: moving the switch to the ON position

The manufacturer is not liable for defects caused by failure to comply with the prescribed procedure.



#### **Basic technical parametres:**

Power supply: 12 (9-24) V AC/DC, 500mA

(optionally integrated ACU 2000mAh for cca 48h of operation)

GSM: 850/900/1800/1900 MHz
Dimension: 185 mm x 99 mm x 40 mm
buttons: 1 or 2 up selected casing

(for every button max. 7 phone numbers dialled progressivelly)

relay: 2x relay with switching contact

Input: 0/5V

#### **Technical parametres:**

Dimension 185 mm x 99 mm x 40 mm

Operating position various

Operating condition temperature: -20 to + 50°C

humidity: 10% ÷ 80% při 30° C

Power supply 12 (9-24) V AC/DC, 500mA

(optionaly integrated ACU 2000mAh for cca 48h of operation

Buttons 1 or 2 up casing

(for each button max 7 numbers progressively dialled)

Relay 2x switching contact
Max. voltage 48V when I<1A
Max. Current 2A when U<30V

Activation time by code1 to 99 sec Activation time by SMS 1 to 99 min

Detection of start / restart. relay1 contact switch to 7s

Input: 0/5V

GSM networks: 850/900/1800/1900 MHz

SIM 3V, 1.8V