



Analogue Modular Door Phone



Installation and Operating Instructions

Welcome

Thank you for purchasing the “**Telstrom Analogue Modular Door Phone**”. The Door Phone is completely modular and scalable for apartments, offices or gate control. The Door Phone can be connected to the PSTN network, PBX extension, or GSM Gateway.

“y” determines number of buttons

“x” determines number of modules

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1 Product Description




1.1 Features

- Up to 64 buttons, each button supports up to two day/night 16 digits telephone numbers.
- Keypad for passcode entry or dialing numbers directly from a PBX extension. E.g room 201. Maximum number of buttons with keypad is 18.
- Surface mount with rain hood,
- Flush mount with optional rain hood.
- 2 switches. E.g. Control gate and door, or light and door
- USB Programming or programming via handset.
- Optional Analogue CCD or IP Camera.
- Day/night switching
- Upto 5 switch modes (e.g. camera, lighting, gradual opening)
- Two codes for hanging up the DoorPhone via telephone handset.
- Two codes for opening door via telephone handset.
- Six code locks (password via buttons at the door)
- Possibility to connect a numerical Keypad this way that the DoorPhone can include 0 – 18 standard buttons
- Keypad mode supports direct dialing or dialing from memory
- Optional number of rings before answering an incoming call
- Integrated heating of printed circuit
- Permanent button lighting.
- Earthing protection against static electricity



1.2 Module Assembly

The modular doorphone consist of various modules to make up the required doorphone system. E.g. Number of buttons, Keypad, type of camera, name plates etc.


The core of the system uses either of:





MAC	DoorPhone controller without any buttons	
MAC1B	DoorPhone controller with 1 button	
MAC2B	DoorPhone controller with 2 buttons	

Additional buttons can be added to the controller with:


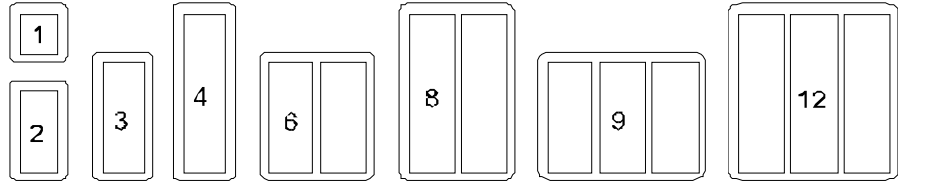
MEXTA	4 button extender A	
MEXTB	4 button extender B (e.g. A,B - A,B - A,B etc)	

Optionals:


MKYB	Keypad entry module	
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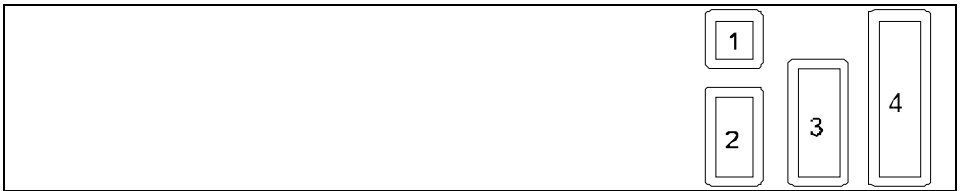
MAIPC	IP camera H.263 and MJPG	
MACCD	Analogue CCD coaxial colour camera	
MBLK	Blanking plate module	
MNME	Name backlit display module for printed list of apartments and names.	

Surface mount boxes with rain hood:

MSBx Where x is number of modules	A wide selection of surface mount boxes with included rain hood.	
		

Flush frame and surface boxes:

MFFx Where x is number of modules	A selection of flush mount boxes with included frame. These can be mounted vertically or horizontally and combined for larger installs. Optional vertical only Rain Hood available MFRx	
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Flush roof to go onto flush boxes only:

<p>MFRx Where x is number of modules</p>	<p>A selection of flush rain hoods, only used with MFFx. These can be only be mounted vertically.</p>	
<p>A diagram showing various flush rain hood configurations labeled 1 through 12. Configuration 1 is a single square hood. Configuration 2 is a single rectangular hood. Configuration 3 is a single tall rectangular hood. Configuration 4 is a single very tall rectangular hood. Configuration 6 is a double rectangular hood. Configuration 8 is a double tall rectangular hood. Configuration 9 is a triple rectangular hood. Configuration 12 is a triple tall rectangular hood.</p>		

1.3 Module Features

1.3.1 DOORPHONE CONTROLLER

The “DOORPHONE CONTROLLER” is supplied in three variants –

<p>MAC</p>	<p>DoorPhone controller without any buttons</p>	
<p>MAC1B</p>	<p>DoorPhone controller with 1 button</p>	
<p>MAC2B</p>	<p>DoorPhone controller with 2 buttons</p>	

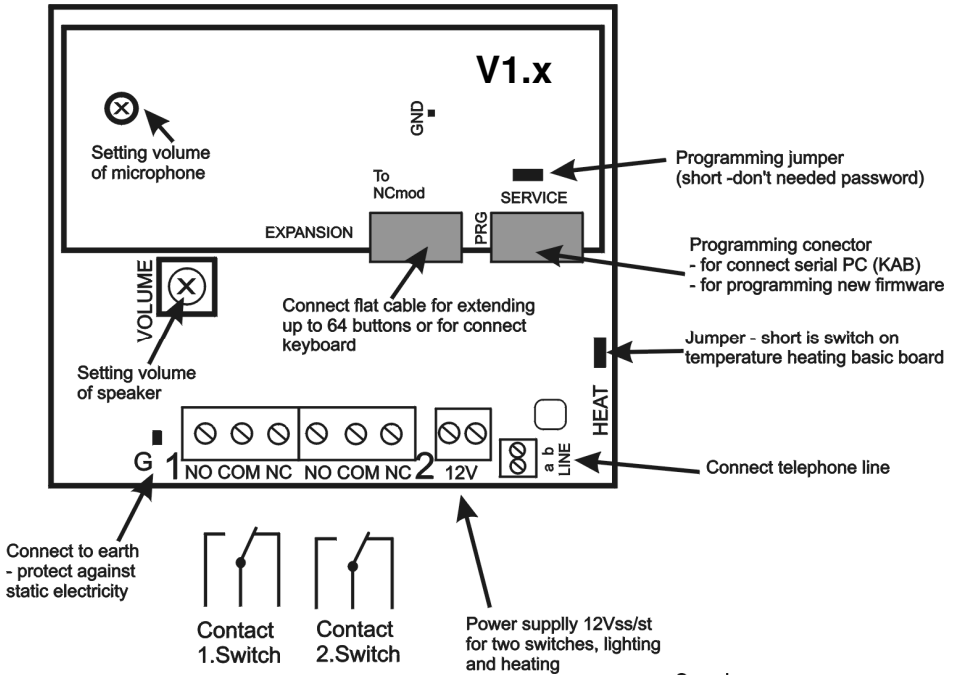


Fig. 1 Rear view of Controller Module

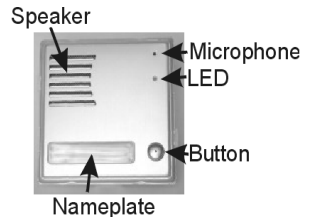


Fig. 2 Rear view

- Connect either a PSTN line or PBX extension to the terminal marked "**ab LINE**".
- If one or two switches are to be used, the A.C. voltage of min. 10VAC - max 15VAC or DC voltage of min 12VDC to max 18VDC must be energized to "**12V**" terminal. This source loading depends on the number of modules, since it simultaneously powers the back lighting. At the maximum number of connected modules the demand will NOT exceed

300mA. The power supply can be also used for feeding lock(s), but you must also consider the electrical lock load. In most cases 12V/1A meets the requirements.

- The connection of switch contact terminals shown on fig. 1.
 - "NO" means a normally open contact,
 - "COM" means the common (middle)
 - "NC" means an normally closed contact.
- The contacts of both switches are galvanically isolated from each other and from other circuits. There are several variations of installation as per figure 3.

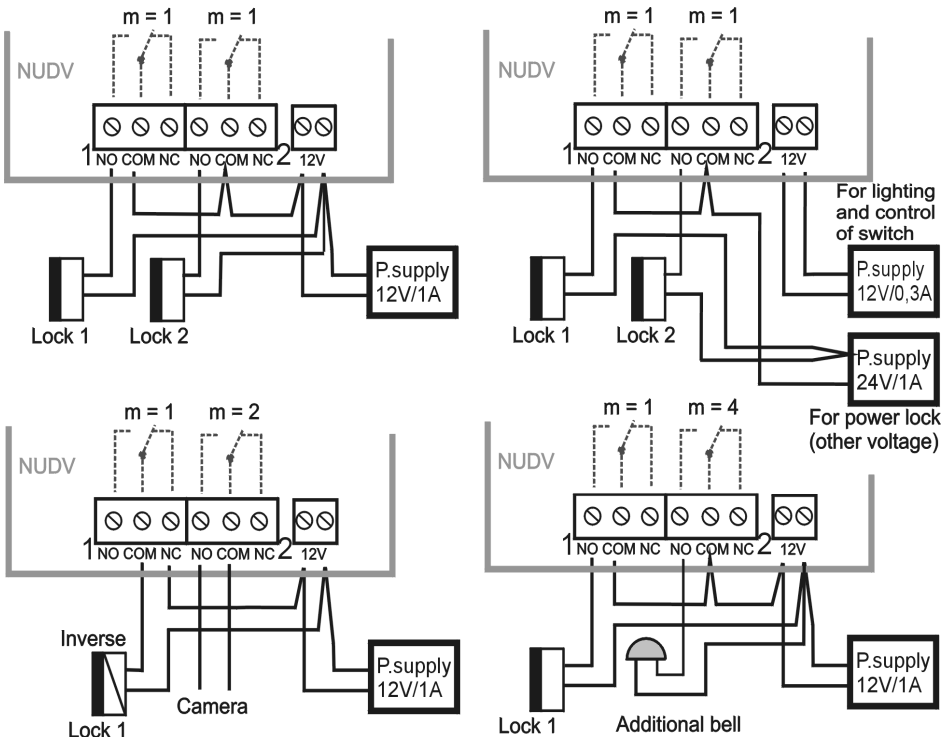


Fig. 3 Examples of switch connections

- The "G" 2.8mm terminal protects against static electricity and is to be connected to Earth.
- The "HEAT" jumper enables on board heating. This function requires the connection of a 12V supply on the "12V" marked terminal.
- The "EXPANSION" connector is for additional modules.
- The "PRG" connector is for a USB/SERIAL cable for configuration. This can also be done via a telephone handset.

- The "**SERVICE**" jumper allows direct access to configuration without the use of a password.
- **Setting speech levels** –Trimmers are for adjusting audio and echo levels. No adjustment should be necessary unless required. The trimmer labeled „MIC“ is for adjusting the microphone sensitivity. Turning it anticlockwise reduces and clockwise increases the gain. The trimmer labelled “SPK“ is for adjusting the Speaker gain.

1.3.2 Adding on 4 button Modules (MEXTA & MEXTB)

Adding additional buttons to the DoorPhone controller is done by adding a MEXTA 4 button module to the main DoorPhone Controller. Following that a METXB 4 button module can be added. The module is connected as per Fig4. The MEXTB module is always connected to previous MEXTA module. For example a system of 14 buttons, you would use the following modules:
 (DoorPhone controller with 2 buttons)+(MEXTA 4 buttons)+(MEXTB 4 buttons)+(MEXTA 4 buttons)
 A system of 4 buttons would be:
 (DoorPhone controller with 0 buttons) + (MEXTA 4 buttons)

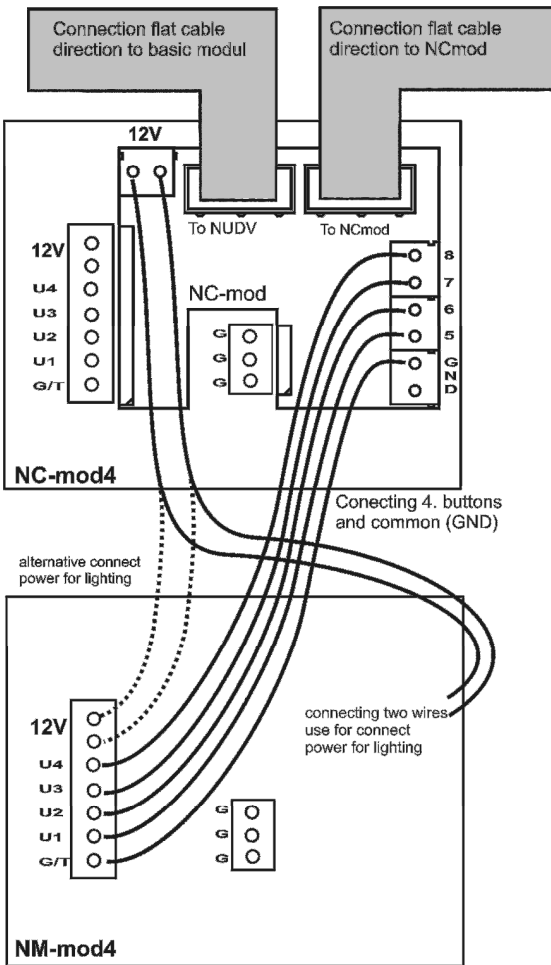


Fig. 4 Connection of MEXTA and MEXTB

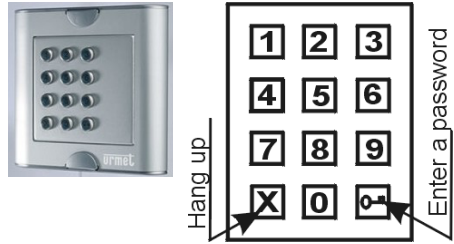
1.3.3 Keypad Module

When using the Keypad module, it must always be installed as the last module. It can be only linked to the first (directly to the Controller Module), the second (to output of the first MEXTA) or the third (to output of the second MEXTA) positions. A maximum of up to 18 buttons with a keypad can be used. The most frequent combinations are:

- DOORPHONE CONTROLLER2 + **KEYPAD**
- DOORPHONE CONTROLLER2 + EXTA + **KEYPAD**
- DOORPHONE CONTROLLER2 + EXTA + EXTB + **KEYPAD**
- DOORPHONE CONTROLLER2 + EXTA + EXTB + EXTA + **KEYPAD**
- DOORPHONE CONTROLLER2 + EXTA + EXTB + EXTA + EXTB + **KEYPAD**

When programming the keypad the position of Keypad must be connected as per parameter 48.

To open a switch from the door, press the key button followed by the switch password. Pressing **X** will hangup the call.



1.4 Installation of the DoorPhone Assembly

1.4.1 Surface Mounted Installation (MSBx)

Install by installing the box on top of the wall using the included template as a guide.

Surface mount boxes with rain hood:

<p>MSBx Where x is number of modules</p>	<p>A wide selection of surface mount boxes with included rain hood.</p>	

1.4.2 Flush Mounted Installation (MFFx)

Flush frame and surface boxes:

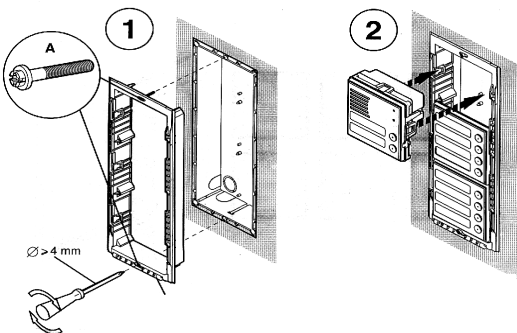
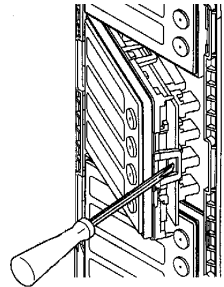
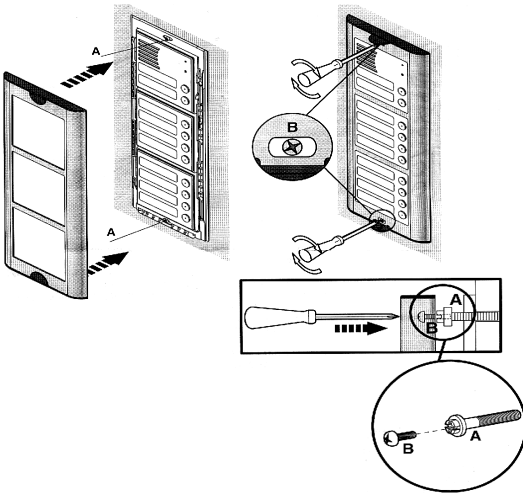
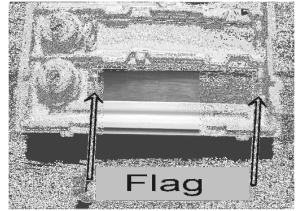
<p>MFFx Where x is number of modules</p>	<p>A selection of flush mount boxes with included frames. These can be mounted vertically or horizontally and combined for larger installs. An optional (vertical only) rain cover is available.</p>	
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The plastic flush mounting box is fitted inside the wall or structure. If a rain hood is being installed the flush box must be mounted vertically as the rain

hoods are only of a vertical orientation. The frame conceals the box. If installed in a high moisture environment (outside) it is recommended to enable the on board heating. The onboard heating, heats up the electronics in winter at temperatures below -20°C and avoids moisture build up.

1.5 Change of button nameplates

Before you can change the button name plates you need to remove the frame. Lift up the two flaps and unscrew the two screws. On the right hand side of the module is a plastic lug, press a flat screwdriver on the lug to release the module by lifting up the right hand side. Each button has a separate nameplate holder by means of plastic flag (see figure). Use name plate template sheet.



DoorPhone Operation

1.6 Signaling Overview

The DoorPhone audio signals are to notify you of different conditions that may occur. Signaling is also be done by a red LED, placed behind the microphone hole.

Condition	Tones	Tone frequency	LED
Off hook		425-850-1275	glows
On hook		1275-850-425	goes out
Report after calling		425-850-1275	glows
Command confirmation from phone		425	
Dialing	DTMF/Pulse		goes out
Call			glows
Call end		1275	glows
Entry to programming from phone		850	glows
Programming from phone		mod. 850	glows
Parameter confirmation			glows
Entry to programming from PC		850	glows
Programming from PC			blinks
Connection to line (Reset)		1275-850-1275	blinks
Error (anything, if unsuitable)		425....	
Empty memory (no progr. numb.)		850-1275-1700...	

1.7 Visitor at Door

When a guest arrives at the DoorPhone, they press the corresponding button for the person they wish to speak to. The DoorPhone will go off hook and dial the pre-programmed number that has been assigned to the button. The person inside the building answers the call and can then enter a DTMF password to open the door/gate.

Button Modes

Each button can have one or two numbers and the operation of the button depends if the DoorPhone is in Day/Night mode or Number Busy mode.

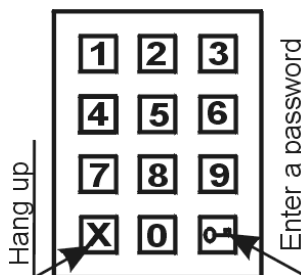
- **Day/night** mode = The DoorPhone in Day mode will always dial the number as set in *parameter 1*. In Night mode, it will always dial the number set in *parameter 2*. To switch Day/Night mode use *parameters 45,46*.
- **1st Number Busy** = In this mode when the guest presses the desired button and if the number is busy, the DoorPhone will try the second number.

Opening the Door/Gate with a password on the DoorPhone

There are two ways to open the Door/Gate when at the DoorPhone.

Using a Keypad

To open the Door/Gate first press the “key” button on the keypad and enter the desired switch 1 or 2 password.



Without a Keypad

You can open the Door/Gate without a keypad by using the first 10 buttons on the DoorPhone in the same combination as preprogrammed as (*parameters 32-34*)

Keypad Speed Dials

The DoorPhone can be programmed with up to 64 speed dials.

Keypad setup

After you have connected (parameter 48).

1.7.1 DoorPhone with Keypad

The DoorPhone with Keypad can also include besides the Keypad up to 18 buttons of direct dialing always behaving as to be mentioned in Chapter 2.2.1 except the code lock. This one is always situated on Keypad. After Keypad is connected, the position, where the Keypad is connected to, should be set (*parameter 48*).

The Keypad has two functional buttons – **key symbol** = once pressing the numerical combination is considered as the combination for control of the switches. The second button – **X symbol** = when pressing the DoorPhone immediately will hang up.

The number selection on Keypad can be executed in two ways (*parameter 49*):

- The incoming person is dialing number as to be done on phone – the period among button presses should be lower than the value given by

parameter 53. After this period the DoorPhone will lift up and dial the given number.

- On buttons the incoming person is dialing a two-digit number (from 01 to 64), which represents the memory number, where the 16-digit number is stored (same as for buttons). The number dialing is managed by Day/Night setting or mode for two groups of numbers (as described in Chapter 2.2.1).

1.8 Person Inside Object

The person inside object is considered a person that is in phone contact with all-purpose DoorPhone.

1.8.1 Outgoing Call

The outgoing call is the call from DoorPhone (caused by visitor). After DoorPhone choice the telephone is ringing inside object and the lifting up will allow speaking to the visitor at door. The code choice can close the switch (*parameter 35*), if set to $m=1$ or $m=5$ modes, change over the Day/Night modes (*parameters 45,46*) and hang up (*parameter 43*). The DoorPhone in 10 seconds before call end (*parameter 52*) will send a notification of call end and the call may be extended by sign selection (*parameter 42*). The telephone hanging up will end the call (the exchange is sending a busy tone on DoorPhone's line and the DoorPhone also will hang up).

1.8.2 Incoming Call

The incoming call is the call from DoorPhone (caused by person inside object). After exchange number selection, where the DoorPhone is connected, the DoorPhone's line is ringing and when set number of rings is over (*parameter 51*), the DoorPhone will lift up and it is possible to speak. The possibilities are the same as with outgoing call (Chapter 2.3.1).

- Except the first 10 seconds, where extra "# and service password" (*parameter 44*) can be entered, the DoorPhone then will proceed with programming mode.
- The other exception of incoming call is by connected "SERVICE" jumper. The DoorPhone after line lifting up proceeds then with programming mode (without service password).

2 Programming of Parameters

2.1 Programming through Phone

2.1.1 Entry to Programming

The all-purpose door DoorPhone will be set to programming mode in two ways:

1. **by password** – only incoming call! – answer the telephone and dial a number, where the DoorPhone is lined (*either branch number, if connected to branch exchange or number of state line to object, where the DoorPhone is placed and let you put through to branch directly connected with DoorPhone*). The DoorPhone will answer (you hear tone for answering – see Chapter 1.6 page 14) up to 10 sec dial **#xxxx**, where xxxx is the service number for entry to programming and if O.K., the registration tone to programming will sound and afterwards the programming tone is heard (see Chapter 14 page 14).
2. **by "SERVICE" jumper** – only incoming call! – you will realize the connection with DoorPhone in the same way as in art. 1, but when the SERVICE jumper is connected, then the DoorPhone after answering directly comes to programming mode – you hear tone for answering, registration tone to programming and afterwards the programming tone is heard. (see Chapter 1.6 page 14).

2.1.2 Programming of parameters

The initial state for programming is signaled by programming tone and the DoorPhone will come back to this state always after time expiration (5 seconds) even you started to program anything.

When programming two types of parameters will occur. Partly they are parameters with **fixed length** – the majority of them they are, then the programming is affirmed and the parameter is always recorded immediately after mandatory length fulfillment by acknowledge tone and partly the parameters **with variable length** (*parameter 1,2,32,33,34*), followed with **confirmation** and the recording of the parameter after inactivity period expires (5 sec). The only case with immediate recording of parameters is the fulfillment of max. number of recorded signs (numbers) – by parameters 1 and 2 it is 16, by parameters 32,33,34 it is 6.

If during programming you enter number (sign) not allowable by its extent then the DoorPhone immediately emits an **error tone**, the parameter will not be recorded nor changed, the DoorPhone will come to initial state and it is possible to repeat the parameter setting or program another parameter.

The DoorPhone stays inactive in programming mode for 34 seconds, then he will automatically hang up. By every dialing of DTMF tone this period is set up repeatedly. The selection of parameter 9 can also end the programming mode.

Note 1. if you wish to keep the connection (extend the 34 seconds period) than the customer will think over the other setting, so pressing e.g.. 6, 7, 0, p or # form time to time will be sufficient and the DoorPhone immediately responds by error tone, but he will extend the period to hanging up..

Note 2. The # sign is NA used by entering of 32,33,34 parameters can be used for immediate parameter entering.

2.2 Programming using a PC

To DoorPhone can be setup using a special KAB cable to serial port and the Nset programming tool.

Procedure:

- Connect the “DOORPHONE CONTROLLER” to the line
- Connect the DoorPhone with PC by KAB cable (if PC serial port absent, use a USB to Serial adapter). The DoorPhone will display a LED on the front panel.
- Run the Nset program – the DoorPhone will report that it is in PC programming mode (chapter 1.6 page 14). by the LED on the front panel flashing every 1 second.

3 Description of Parameters

3.1 Direct Dialing – Memories

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
1	tt nn...	No. nn under button tt	-	-	-

tt – Button number (memory), always set in two-digit manner [01-64]

nn – telephone number up to 16 digits, we want to store. To store other choice flags the assignment given in table is used.

The numbers stored in parameter 1 are the number of the **first group** or numbers of **Day** mode.

Neither basic setting nor settings per examples do NA change or delete the stored numbers.

mean.	choice
0 - 9	0 - 9
#	#
*	**
Flash	* #
Pause	*0

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
2	tt nn...	No. nn under button tt	-	-	-

tt – Button number (memory), always set in two-digit manner [01-64]

nn – telephone number up to 16 digits, we want to store.

To store other choice flags the assignment given in table is used..

mean.	choice
0 - 9	0 - 9
#	#
*	**
Flash	* #
Pause	* 0

The numbers stored in parameter 2 are the number of the **second group** or numbers of **Night** mode.

Neither basic setting nor settings per examples do NA change or delete the stored numbers.

Note: The switchover to Day/Night mode remains set in DoorPhone even after line disconnection.

List of related parameters: **41 45 46 47 48 49 57 58 59 50 81 82**

3.2 Switches

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
31	r m	switch r works in m mode	11 21	11 22	11 25

r – switch number [1-2]

m – switch mode [for **r**=1 1-4 , for **r**=2 1-5]

m=1 **switch** mode – it will close on command or password for **ss** period (used for electrical locks, gate opening etc.)

m=2 **camera** mode – it will close by DoorPhone lifting up and open by hanging up.

m=3 **lighting** mode – it will close by DoorPhone lifting up and stay closed even for **ss** period after DoorPhone hanging up (the line is engaged for this period).

m=4 **switch** mode – it will close after button pressing and open after **ss** period (used for e.g. external bell or horn connections).

m=5 **gradual opening** mode – in this mode the only switch 2 will be set together with switch 1 set to mode 1. The switch 1 is activated for **ss** period, then the time **xx** is proceeding before switch 2 closing. Then the switch 2 is activated for **ss** period and afterwards the DoorPhone hangs up.

Note: The only switch 1 can be activated from phone and all sequence started.

Besides that the switch 2 can be separately activated from buttons by password.

List of related parameters: **32 33 34 35 36 37 38 # 83**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
32	r hhhhhh	passw. hhhhh for switch r in DAY + NIGHT mode	-	1 121 2 122	1 4561 2 4562
33	r hhhhhh	passw. hhhhh for switch r in DAY mode	-	-	-
34	r hhhhhh	passw. hhhhh for switch r in NIGHT mode	-	-	-

r – switch number [1-2]

hhhhhh – password for switch closing from buttons or Keypad [2 to 6 digits]
 Total 6 passwords, they are controlled by Day/Night; the combination is entered either by DoorPhone buttons (first 10 buttons) or from attached Keypad (after pressing of key symbol). The switch closing influences the set switch **mode** and **Day/Night** switchover. By setting of choice mode of **2 number groups** the DoorPhone is permanently in **DAY** mode.

By password choice some rules have to be observed:

- Select passwords in way NA to find its combination out from wear of certain buttons by frequent use.
- Select the first password button from frequentless button for direct dialing (-extends choice time)(-NA valid for Keypad).
- Pay attention to congruity of password numbers when one password includes other one, e.g. switch 1 has 1234 and switch 2 has 12345. Then after pressing button 4 the only switch 1 is called, but password choice 234 for switch 2 can call both switches after pressing switch 4.

Note: The switchover to Day/Night mode remains set in DoorPhone even after line disconnection.

List of related parameters: **31 35 36 37 38 45 46 47 48 49 53 8# 83**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
35	r aa	command aa from phone after r switch closing	155 266	155 266	155 266

r – switch number [1-2]

aa – command from phone after switch closing [2 digits]

The same command can be set for both switches, then they are activated at the same time. The advantage is to set the same command both for switch closing and command to DoorPhone hanging up (*parameter 43*) **aa=bb**.

List of related parameters: **31 36 37 38 43 8# 83**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
36	r ss	ss period [sec] of r switch closing	105 205	102 202	105 205

r – switch number [1-2]

ss – duration of switch closing [2 digits 01-99]

List of related parameters: **31 32 33 34 35 37 38 8# 83**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
37	r p	r switch control by incoming call	11 21	11 21	11 21

r – switch number [1-2]

p – parameter, if **p=1** allowed or **p=0** prohibited to control the switch during incoming call.

To prohibit the control during incoming call is important e.g. when using switch 2 in mode 1 for control of garage gate opening, when the electronics opens the gate and the gate is closed by car passage. Then the control from phone could undesirably cause the permanent gate opening (NOT closed – no car passage).

List of related parameters: **31 35 8# 83**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
38	xx	xx period [sec] between switches 1 and 2 closing	10	10	15

xx – time between close switches 1 and 2 by **m=5** mode setting (gradual opening) [2 digits 01-99]

List of related parameters: **31 32 33 34 35 36 37 8# 83**

3.3 Basic Parameters

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
41	v	choice type v – tone / pulse	0	0	0

v – choice type **v=0** is DTMF tone choice, **v=1** is pulse choice

List of related parameters: **1 2 8# 84**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
42	z	sign for call extension	ρ	ρ	ρ

z – sign for call extension ρ or # (10sec before call end the DoorPhone will send a tone, then the call may be extended)

List of related parameters: **52 8# 84**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
43	g bb	command for DoorPhone hanging up from phone	155 266	155 244	155 244

g – command order [1-2] (two commands in order to hang up the DoorPhone using both switches)

bb – command for DoorPhone hanging up from phone [2 digits]

The advantage is to set the same command both for switch closing (*parameter 35*) and command to DoorPhone hanging up **aa=bb**.

List of related parameters: **35 8# 84**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
44	xxxx	service password	0000	0000	0000

xxxx – service password for entry to programming

List of related parameters: **8# 84**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
45	dd	command for DAY switching	11	11	11
46	nn	command for NIGHT switching	10	10	10

dd – command for **DAY** mode switching [2 digits]

nn – command for **NIGHT** mode switching [2 digits]

Note: The switchover to Day/Night mode remains set in DoorPhone even after line disconnection.

List of related parameters: **1 2 33 34 47 8# 84**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
47	e	mode of DoorPhone choice	1	1	0

e – mode of DoorPhone choice **e=0** selects numbers of the first and second groups, **e=1** selects number per **Day/Night** DoorPhone mode.

List of related parameters: **1 2 8# 84**

ATTENTION !! This parameter setting will sharply influence the dialing.

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
48	c	Keypad connection	0	0	1

- c** – **c=0** only EXTAE connected to the Controller Module
c=1 the Keypad connected on the first position
c=2 the Keypad connected on the second position
c=3 the Keypad connected on the third position

ATTENTION !! This parameter setting will sharply influence whole DoorPhone function.

List of related parameters: **1 2 32 33 34 47 49 53 8# 84**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
49	o	Keypad mode	0	1	0

- o** – **o=0** dialing as on normal telephone (all number of called person should be pressed on Keypad).
o=1 Only 2-digit memory number is entered on Keypad by which the number of called person is stored (memory number corresponds to button number with respect to Day/Night switchover).

ATTENTION !! This parameter setting will sharply influence Keypad function.

List of related parameters: **1 2 47 48 53 8# 84**

3.4 Time Parameters

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
51	q	number of rings before DoorPhone call lifting up	2	1	2

- q** – Number of incoming call rings, the DoorPhone lifts up among rings namely 2 sec. after detection **q** – times rings. The number can be set from 1 to 9.

List of related parameters: **44 8# 85**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
52	d	max. call time	2	2	1

- d** – max. time, for which the DoorPhone is hanging up, this time can be extended during call by sign choice from telephone (* or #). Time setting is per table.

List of related parameters: **42 8# 85**

time [min]	choice
0,5	0
1 - 9	1 - 9
15	*
30	#

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
53	w	time among button presses	2	2	2

w – max. time [sec] among button presses [range 1-9]

▪ **normal buttons**

- **switch closing** – if time between two next presses is bigger than **w** time, the code is NOT evaluated correctly.
- **dialing** – if the button, we are pressing, is the first password number for switch closing, so the choice is delayed by this **w** time.

▪ **Keypad**

- **switch closing** – if time between two next presses is bigger than **w** time, the code is NOT evaluated correctly.
- **dialing**
 - dialing the same as of phone, if time after the last pressed button is bigger than **w** time, then the dialing starts. If the number is incomplete, it is necessary to hang up (**X** button) and the dialing will be repeated.
 - dialing from memory, if time following the first pressed button is longer than **w** time, then the entry of memory number has to be repeated.

List of related parameters: **1 2 32 33 34 47 48 49 8# 85**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
54	z	time of hanging up when dialing repeated	2	2	2

z – time [sec] for which the DoorPhone will hang up, before repeated dialing (button pressing during call or dialing, busy tone detection) [range 1-5]

List of related parameters: **8# 85**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
55	z	time before dialing	1	1	1

z – time [sec] after DoorPhone lifting up before dialing [range 1-5]. This time is different for each exchange, but most central exchanges usually manage to process dialing up to 2 seconds after line lifting up.

List of related parameters: **8# 85**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
56	h	number of rings before hanging up	12	12	12

h – after finishing the dialing it calculates number of KVT (ringing tones). If the number exceeds **h** value, it will hang up [range 04-99]. The dialing is repeated in case, when the dialing mode of 2 groups is set.

List of related parameters: **47 8# 85**

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
57	t	DTMF tone duration (tone choice)	5 (100ms)	5 (100ms)	5 (100ms)
58	m	gap duration among DTMF tones	5 (100ms)	5 (100ms)	5 (100ms)
59	f	Flash duration	1 (100ms)	1 (100ms)	1 (100ms)
50	p	pause duration / interdigit gap	8 (800ms)	8 (800ms)	8 (800ms)

t – DTMF tone duration is determined per formula:

$$(\text{entered number} + 5) \times 10 = \text{tone duration} \text{ [ms]}$$

[range 1-0 i.e. 60-150ms]

m – gap duration among DTMF tones is determined per formula:

$$(\text{entered number} + 5) \times 10 = \text{gap duration} \text{ [ms]}$$

[range 1-0 i.e. 60-150ms]

f – Flash duration is determined per formula:

$$\text{entered number} \times 100 = \text{Flash duration} \text{ [ms]}$$

[range 1-6 i.e. 100-600ms]

p – pause duration is determined per formula:

$$\text{entered number} \times 100 = \text{pause duration} \text{ [ms]}$$

[range 5-0 i.e. 500-1000ms]

– **p** time is simultaneously the duration of interdigit gap at pulse dialing.

List of related parameters: **1 2 41 8# 85**

3.5 Presetting and Deleting

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
8#	#	basic setting	executes		
8#	1	setting per exam. 1		executes	
8#	2	setting per exam. 2			executes

This setting does NOT influence 1 and 2 (numbers stored in memory)

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
81		deletes all numbers in group 1 (Day mode)			
82		deletes all numbers in group 2 (Night mode)			
83		basic setting only for parameters 3x	only 3..		
84		basic setting only for parameters 4x	only 4..		
85		basic setting only for parameters 5x	only 5..		

The parameters 81 and 82 will execute deleting of all numbers stored in memories for buttons.

The parameters 83 – 85 will execute a selective basic setting only for parameters starting with 3.. – 5..

ATTENTION !!! the deleting is non-reversible !!!, It is then necessary to program it again.

3.6 Programming Termination

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
9		E N D			

After dialing 9 to programming tone the DoorPhone will hang up.

3.7 System Setting

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
6#	s	number of non-fitted buttons of Controller Module			

The Controller Module is fitted with 2 buttons as standard, i.e. s = 0, s = 1 is set up for Controller Module with one button and s = 2 for module without buttons. This setting is a factory one, no service can change it and so it is recommended not to change this parameter.

Note: Connecting to the line the value of this parameter is checked and if NOT satisfactory form unknown reasons, so it is set up to s = 0 (fitted with 2 buttons).

Attention !!! This parameter does affect the correct function of DoorPhone.

Parametr	Value	Description	Basic	Exam. 1	Exam. 2
6	z	Switching off acoustic signalization	3	3	3

In default is status of Door phone signalling acoustically. It can cause a problem of incorrect detection of tones by PBX. By parametr „z“ you can switch off this acoustic signalization. The values are z=0 – all signalling is switched off

z=1 – pick up and hang up tones are active only

z=2 – other tones active only (except pick up and hang up)

z=3 – all tones are active – **default**

Parametr	Value	Description	Basic	Exam. 1	Exam. 2
6*	t	Delay of line connection (Siemens PBX)	1	1	1

The delay of line picks up (OFF HOOK) for new PBX types (particularly Siemens) is:

t=1 – standard operation

t=0 – delayed start

3.8 Overview of Parameters

Parameter	Value	Meaning	Basic	Exam.1	Exam.2
1	tt nn...	No. nn under button tt	-	-	-
2	tt nn...	No. nn under button tt	-	-	-
31	r m	switch r works in m mode	11 21	11 22	11 25

32	r hhhhhh	pasw. hhhhhh for r switch in DAY + NIGHT mode	-	1 121 2 122	1 4561 2 4562
33	r hhhhhh	pasw. hhhhhh for r in DAY mode	-	-	-
34	r hhhhhh	pasw. hhhhhh for r in NIGHT mode	-	-	-
35	r aa	command aa from phone after r switch closing	155 266	155 266	155 266
36	r ss	ss period [sec] of r switch closing	105 205	102 202	105 205
37	r p	r switch control by incoming call	11 21	11 21	11 21
38	xx	xx period [sec] between switches 1 and 2 closing	10	10	15
41	v	choice type v – tone / pulse	0	0	0
42	z	sign for call extension	ρ	ρ	ρ
43	g bb	command for DoorPhone hanging up from phone	155 266	155 244	155 244
44	xxxx	service password	0000	0000	0000
45	dd	command for DAY switching	11	11	11
46	nn	command for NIGHT switching	10	10	10
47	e	mode of DoorPhone choice	1	1	0
48	c	Keypad connection	0	0	1
49	o	Keypad mode	0	1	0
51	q	number of rings before DoorPhone call lifting up	2	1	2
52	d	maximum call time	2	2	1
53	w	time among button presses	2	2	2
54	z	time of hanging up when dialing repeated	2	2	2
55	z	time before dialing	1	1	1
56	h	number of rings before hanging up	12	12	12
57	t	DTMF tone duration (tone) choice	5 (100ms)	5 (100ms)	5 (100ms)
58	m	gap duration among DTMF tones	5 (100ms)	5 (100ms)	5 (100ms)
59	f	Flash duration	1 (100ms)	1 (100ms)	1 (100ms)

50	p	pause duration / interdigit gap	8 (800ms)	8 (800ms)	8 (800ms)
8#	#	basic setting	executes		
8#	1	setting per exam. 1		executes	
8#	2	setting per exam. 2			executes
81		deletes all numbers in group 1 (Day mode)			
82		deletes all numbers in group 2 (Night mode)			
83		basic setting only for parameters 3x	only 3..		
84		basic setting only for parameters 4x	only 4..		
85		basic setting only for parameters 5x	only 5..		
9		E N D			

3.9 List of Parameters

parameter	bas. cast.	example 1	example 2
switch 1 mode	lock m=1	lock m=1	lock m=1
switch 2 mode	lock m=1	camera m=2	prog. m=5
passw.Day+Night switch 1	NA	121	4561
passw. Day+Night switch 2	NA	122	4562
passw.Day switch 1	NA	NA	NA
passw.Day switch 2	NA	NA	NA
passw. Night switch 1	NA	NA	NA
passw. Night switch 2	NA	NA	NA
switch 1 activ. from phone	55	55	55
switch 2 activ. from phone	66	66	66
closing time of switch 1 and 2	5 sec	2 sec	5 sec
con. by incoming call	allowed	allowed	allowed
delay among ap. during oper.	10 sec	10 sec	15 sec
choice	DTMF	DTMF	DTMF
sign of call extension	ρ	ρ	ρ
hanging up from phone 1 / 2	55 / 66	55 / 44	55 / 44
service password	0000	0000	0000
switching to day mode	11	11	11
switching to night mode	10	10	10
DoorPhone choice mode	Day/Night	Day/Night	2 groups
Keypad connection	no	no	on 1 st place
Keypad mode	dialing	memory numbers	dialing
number of rings of incoming call	2	1	2
max. call time	2 min	2 min	1 min
time among button presses	2 sec	2 sec	2 sec
time of hanging up when dialing repeated	2 sec	2 sec	2 sec
time before dialing	1 sec	1 sec	1 sec
number of rings before hanging up	12	12	12
DTMF tone duration (tone) choice	100ms	100ms	100ms
gap duration among DTMF tones	100ms	100ms	100ms
Flash duration	100ms	100ms	100ms
pause duration / interdigit gap	800ms	800ms	800ms

4 Technical Parameters

4.1 Electrical Parameters

Parameter	Value	Conditions
Minimum line current	18mA	line answered
Minimum line voltage	18V	line hang up
Voltage on line while DoorPhone answers (VA characteristics)	< 8V < 12V	I = 20mA I = 60 mA
Leakage in hang up status	< 50uA	U = 60V
Impedance of line termination	130R + 820R paral. 220n	line answered
Band width	300Hz – 3400 Hz	20 - 60mA
Impedance of ringing	> 2Kohm	25 – 60 Hz
Sensitivity of ringing detector	min. 10 – 25 V	
Pulse choice	40 / 60 ms	
Tone choice level	4 a 6 dB	20 – 60 mA
Tone choice sensitivity	40 dB	20 – 60 mA
Sensitivity of tone detector	30 dB	20 – 60 mA
Power supply of lighting through, switches and heating	12VDC ± 2V , 10-12VAC ± 2V	
Max. consumption of lighting through and heating	300mA	12VDC
Max. voltage of switch contact	48V	at I < 1A
Max. current of switch contact	2A	at U < 30 V
Operational temperature	- 20 to + 50 °C	

4.2 Mechanical dimensions

Type of item	dimensions HxWxD [mm]			
	1 module	2 modules	3 modules	4 modules
mount. box	114x118x45	204x118x45	294x118x45	384x118x45
KPDxx (on plast.)1col.	151x157x79	241x157x79	331x157x79	421x157x79
KPDxx (on plast.)2col.	-	241x286x79	-	421x286x79
Canopy xx	149x151x49	241x151x49	331x151x49	421x151x49
frame	147x151x3	239x151x3	299x151x3	399x151x3

5 Table for Easy Programming

Use the below table to enter the desired parameters for your door phone.

Meaning		Programming sequence		Max digits
Description	Spec.	par.	Complete your values	
Number for button 1	Day/1gr.	101		16
Number for button 2	Day/1gr.	102		16
Number for button 3	Day/1gr.	103		16
Number for button 4	Day/1gr.	104		16
Number for button 5	Day/1gr.	105		16
Number for button 6	Day/1gr.	106		16
Number for button 7	Day/1gr.	107		16
Number for button 8	Day/1gr.	108		16
Number for button 9	Day/1gr.	109		16
Number for button 10	Day/1gr.	110		16
Number for button 11	Day/1gr.	111		16
Number for button 12	Day/1gr.	112		16
Number for button 1	Night/2gr.	201		16
Number for button 2	Night/2gr.	202		16
Number for button 3	Night/2gr.	203		16
Number for button 4	Night/2gr.	204		16
Number for button 5	Night/2gr.	205		16
Number for button 6	Night/2gr.	206		16
Number for button 7	Night/2gr.	207		16
Number for button 8	Night/2gr.	208		16
Number for button 9	Night/2gr.	209		16
Number for button 10	Night/2gr.	210		16
Number for button 11	Night/2gr.	211		16
Number for button 12	Night/2gr.	212		16
Switch 1 works in mode	m=1 - 4	311		1
Switch 2 works in mode	m=1 - 5	312		1
Password for switch 1	Day+Night	321		6
Password for switch 2	Day+Night	322		6
Password for switch 1	Day	331		6

Password for switch 2	Day	332		6
Password for switch 1	Night	341		6
Password for switch 2	Night	342		6
Clos. of switch 1 fr. phone		351		2
Clos. of switch 2 fr. phone		352		2
Closing time of switch 1	[sec]	361		2
Closing time of switch 2	[sec]	362		2
Sw. cont.1 by incoming call	1 / 0	371		1
Sw. cont.2 by incoming call	1 / 0	372		1
Time between 1 and 2 switch closing	[sec]	38		2
Tone/pulse tone choice	1 / 0	41		1
Sign of call extension	* / #	42		1
DoorPhone hang. up from phone	1.	431		2
DoorPhone hang. up from phone	2.	432		2
Service password		44		4
Comm. to DAY switching		45		2
Comm. to NIGHT switching		46		2
DoorPhone choice mode	1 / 0	47		1
Keypad connection	0/1/2/3	48		1
Keypad mode	1 / 0	49		1
Number of rings for ringing		51		1
Maximum call duration	[min]	52		1
Time among button press.	[sec]	53		1
Hang. up time when dialing repeated	[sec]	54		1
Time before dialing start	[sec]	55		1
Num. of rings bef. hang. up		56		2
Duration of dialing tone	(n+5)x10	57	ms	1
Gap among DTMF tones	(n+5)x10	58	ms	1
Flash duration	nx100	59	ms	1
Pause / interdigit gap	nx100	50	ms	1

Warranty:

The product was checked before dispatch. The manufacturer guarantees that this product will work as described as per the operating instructions. If the unit under goes repair for an in warranty claim, the guarantee will be extended by the time it takes to repair the unit.

When claiming a warranty, please contact your dealer. The manufacturer will only will make the in warranty repairs at no cost. Attach the description of claim reason, proof of purchase and your return delivery address for the product.

The guarantee does not include:

- mechanical, thermal, chemical and other damages caused by user's activities
- defects caused by natural disasters
- defects caused by repair or changes carried out by a user or any other unauthorized person
- willful damage of product
- incorrect use of product caused by other use than specified in operating manual.
- damages caused during product transport to customer and from supplier

Producer:
Dealer:
Date of sale: