



## Link Slim IP Door Phone



### Manual

### v1.2

*find the latest version of the manual and firmware at [www.linkcom.fr](http://www.linkcom.fr)*



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# 1. Basic Description

## 1.1. Features

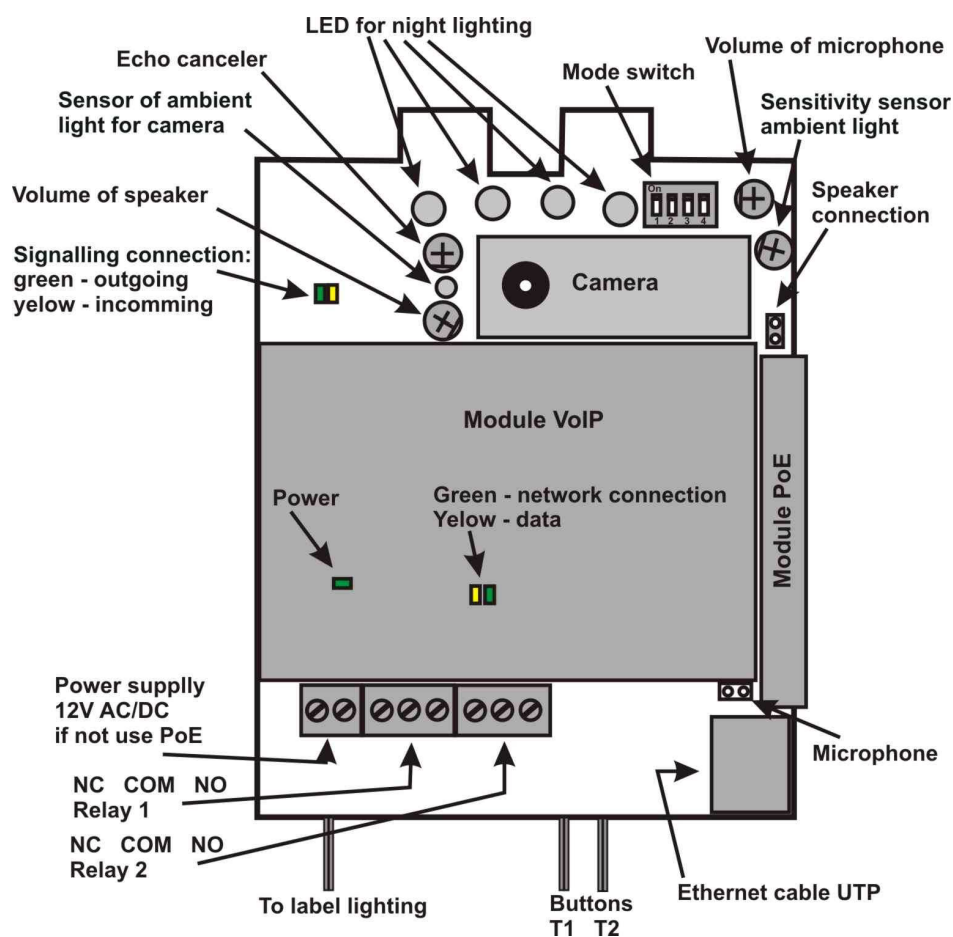
- Voice & Image based on Full SIP protocol
- Autofocus IP Camera
- White LED for automatic lighting for camera
- WEB management
- WEB – firmware upgradeable
- Video streaming : http jpg / http mjpg and H.363
- PoE technology or Power supply 12V AC/DC, 500mA max
- Ethernet – 10/100Mb
- SIP connection P2P or PBX network system
- Two 25 digit numbers (or IP adress) with each button
- Day/night switching feature
- Extending call duration by pressing \* or #
- 2 Relays with Possibility to connect two independent locks
- Possibility to control with the second Relay (e.g. camera, lighting, delayed opening)
- Two codes prefix controlling communication hang off
- Two codes prefix for door opening
- Six locks password 3 per relay ( Night, Day, Day/Night)
- Integrated heating of printed circuit
- Permanent lighting through visiting cards
- Operating system – Linux 2.6



## 2. Physical install

### 2.1. Assembled modules

**Link Slim IP DoorPhone** is based on IP module, assembled with the mother boards and IP Camera circuit (picture 1)



Picture 1 Basic module - motherboard

### 2.2. PoE or Power Supply

For **Slim IP DoorPhone** is necessary used PoE power from switch or the AC voltage of 11-15V or DC voltage of 12-15V, not exceed 300mA.

In practice the alternating feeder 12V/1A mostly meets these demands.

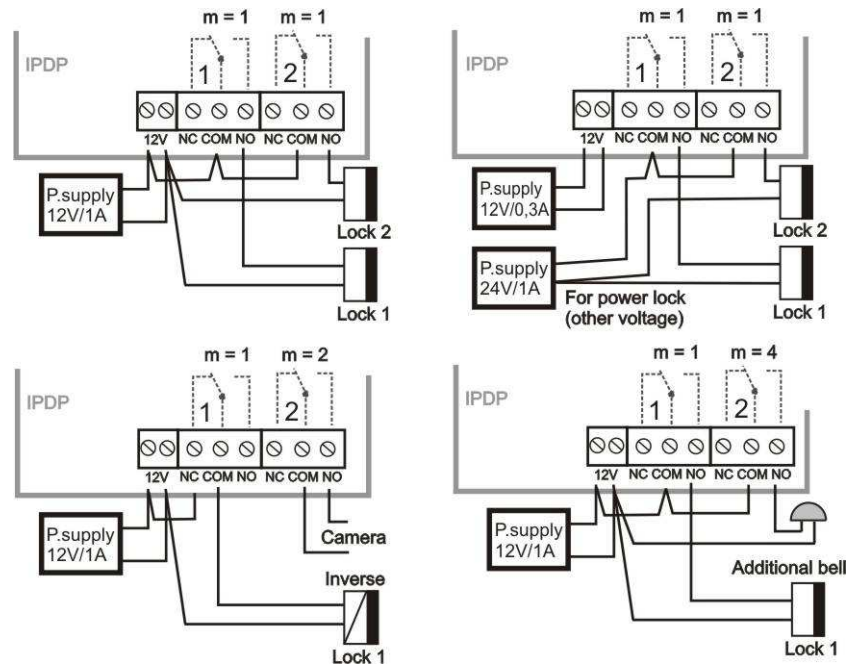


## 2.3. Relay Connection

Relay connection is shown on Picture 2. Where

- **NO** means idle-disconnected contact,
- **COM** means a pin contact (middle)
- **NC** means an idle-connected contact.

The contacts of both switches are galvanically isolated from each other and from the circuits.



Picture 2 Examples of relays connections

## 2.4. Acoustic setting

Trimmers positions are positioned in factory and in major cases will not need to be changed. Basic position of the trimmers, sense of rotation and meaning are illustrated on picture 3.



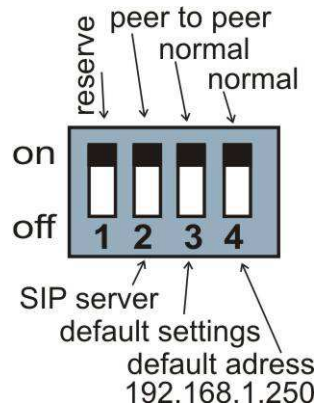
Picture 3 Setting of trimmers



## 2.5. DIP Switch

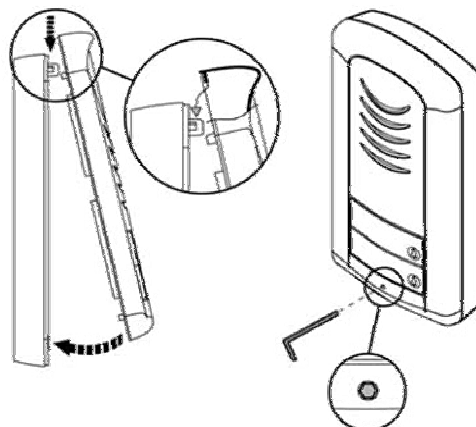
**DIP switch** setting basic operation and default setting. See on picture 4.

State of DIP switch is reading at start the **Slim IP DoorPhone**. After get started system is necessary DIP switch 3 and 4 always return to the position "On", because at next reboot system would be new values overwriting by default value.

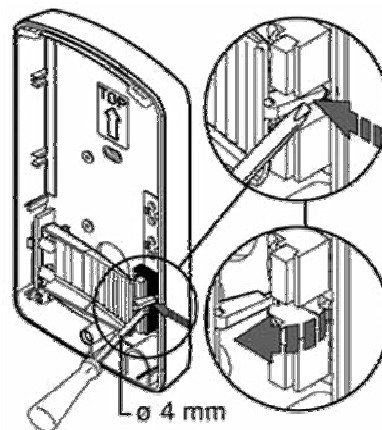


Picture 4 DIP switch settings

## 2.6. Open and close the cover



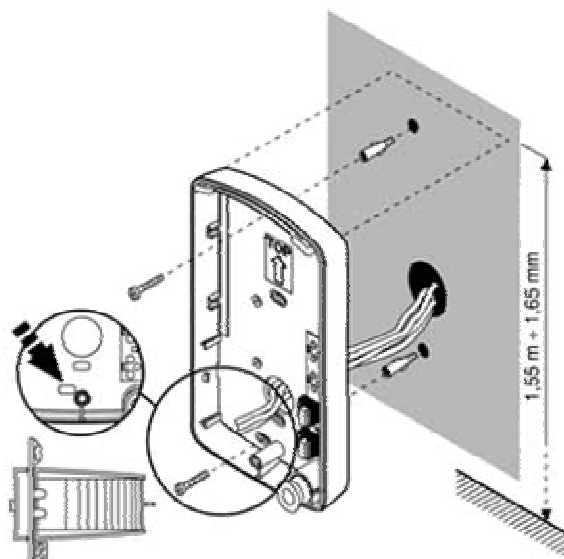
## 2.7. Dismounting lighting of nameplate



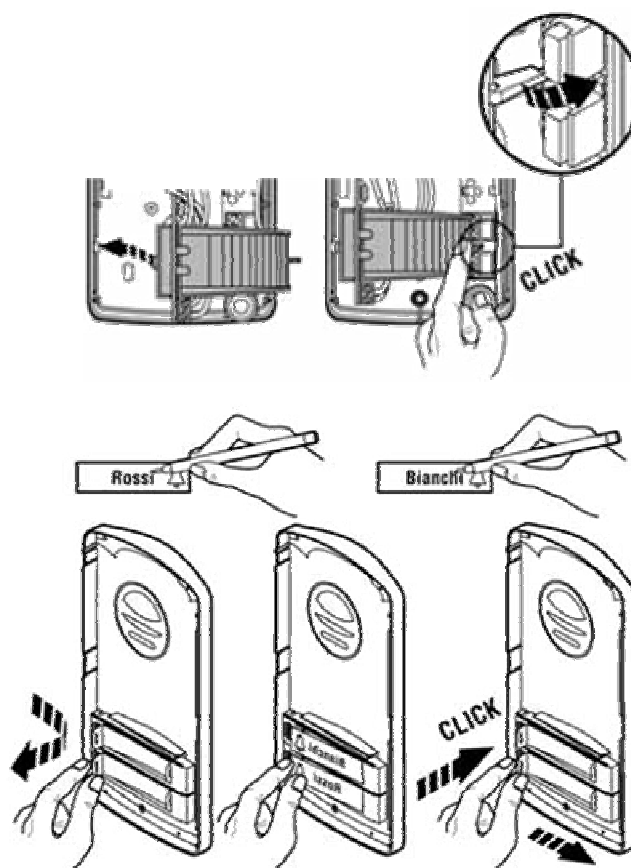


## 2.8. Assembly on the wall

The installation is made by screwing to the wall by means of dowels.



## 2.9. Return lighting name plate after mounting on the wall.



Each button has its separate nameplate hold by means of plastic flag (see figure).





## 2.10. Acoustic Signalling

The following board shows the acoustic signals that occur during operation.  
A Lighting signal is also available through the single LED (see page 4).

| Condition                       | Tones | Tone frequency   | LED      |
|---------------------------------|-------|------------------|----------|
| Line lifting up                 |       | 425-850-1275     | light    |
| Line hanging up                 |       | 1275-850-425     | dark     |
| Report after calling            |       | 425-850-1275     | light    |
| Notice about call end           |       | 1275             | light    |
| Parameter confirmation          |       |                  |          |
| Switch on (Reset)               |       | 1275-850-1275    | blink    |
| Error (anything, if unsuitable) |       | 425....          |          |
| Empty memory (no progr. numb.)  |       | 850-1275-1700... |          |
| Waiting to talk                 | -     | -                | blinking |
| Is talk                         | -     | -                | light    |

## 3. Visitor at Door

**Slim IP Door Phone** is provided with 2 Buttons. To each Button is associated Name of Company or physical Person name. To each button is associated 2 Call numbers ( Table 1 and Table 2)  
The visitor will press the corresponding button, the **Slim IP Door Phone** manage to make the call through the VoIP channel. If the **Slim IP Door Phone** is programmed with the following

- **Group** Mode: if after a number of Ring called party do not answer the **Slim IP Door Phone** will manage to call the second number saved in table 2.
- **Day/night** mode: In Day mode, the **Slim IP Door Phone** will always dial the number programmed in table 1. In Night mode, the **Slim IP Door Phone** will always dial the number programmed in table 2.
- **Manual code lock** Allow opening the gate by dialling on the 2 keys a combination up to 6 push. If visitor presses buttons in such combination that meet the pre-programmed day, Night or Day/Night password code within the laps of time duration between each presses buttons set on time table, then the **Slim IP Door Phone** will trigger the corresponding relay.

### 3.1. Incoming and Outgoing Calls

#### Incoming Call :

Incoming calls from IPBX or SIP phone are authorized, When a call is performed the **Slim IP Door Phone** will ring from [1 to 5 ] rings depend what is programmed in table call is picked up automatically and caller is able to speak with the **Slim IP Door Phone** and trigger the Relay 1 or 2 .

#### Outgoing Call :

Outgoing calls from **Slim IP Door Phone** to IPBX or SIP phones are available by pressing one of the 2 buttons. IPBX and or SIP phone will ring:

- If called party pick up the call conversation take place and called party can trigger Relay 1 or 2
- If called party do not pick up the call after a pre-programmed N° of Ring
  - o Either the **Slim IP Door Phone** is programmed in DAY/NIGHT mode in this case call ends





- Either **Slim IP Door Phone** is programmed in mode Group in this case a second call is performed to the number programmed in Table 2 ( See Page 16 )

In both cases, Incoming or outgoing call, Conversation can be extended by dialling from the SIP phone (\* or #) after hearing the tone 10 seconds before call end.

## 4. Parameters Programming

### 4.1. Choosing a mode and login

It is important to choose the **Slim IP Door Phone** mode first. The **Slim IP Door Phone** work in P2P or SIP server mode. The mode setting depends on the Dip Switch position (page 6). In SIP server mode it is possible to choose SIP server (external). It can be set in a configuration interface of the **Slim IP Door Phone**.

In your web browser enter IP address of the **Slim IP Door Phone**, default is « **192.168.1.250** ». See **Picture 5**. Enter user name and password. default User name is « **admin** », password is « **1234** ». See **Picture 5**.



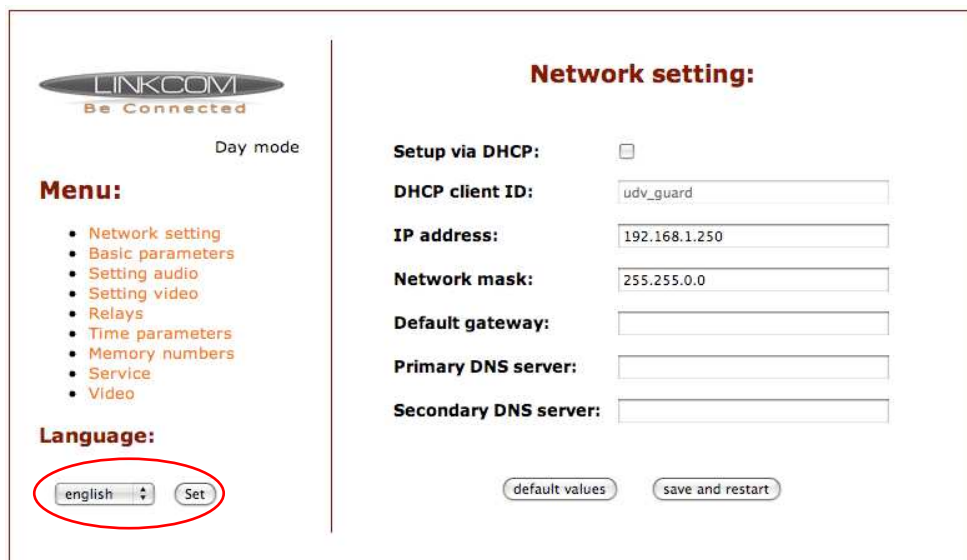
Picture 5 First site video from camera



Picture 6 Login to setup

### 4.2. Language option

Select « **Language** » in the left panel menu choose the language then clic « **Set** » Button.



### 4.3. Network settings: DHCP or fixed IP mode

In **Network setting** menu, It is possible to use DHCP automatic setup or enter manually IP addresses. After making all changes click on a « **save and restart** » button. Restarting is mandatory for those steps



## Manual configuration :

LINKCOM  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english [v] Set

**Network setting:**

Setup via DHCP: ☐ 1

DHCP client ID: udv\_guard

IP address: 192.168.1.250

Network mask: 255.255.0.0

Default gateway:

Primary DNS server:

Secondary DNS server:

default values 2 save and restart

1 : Enable/disable Ethernet settings via DHCP

2 : Default value – presetting to default value settings. After making changes click on a save and restart button

## DHCP configuration :

LINKCOM  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video 4

**Language:**

english [v] Set

**Network setting:**

Setup via DHCP: ☒ 1

DHCP client ID: DoorPhone 3

IP address: 192.168.1.250

Network mask: 255.255.0.0 2

Default gateway: 192.168.1.1

Primary DNS server: 192.168.1.250

Secondary DNS server:

default values save and restart

1 : Enable/disable Ethernet settings via DHCP

2 : Show automatic DHCP generate IP address and other settings

3 : Show mode of DoorPhone – Day/Night

4 : Return to the video from colour camera screen

**Important:** if you choose DHCP setup, it will automatically assign an IP address to **Slim IP Door Phone** and network administrator must tell you actual address, to display video in web browser. Because assigning IP address can change after e.g . power failure, We recommend the setting of **Slim IP Door Phone** fixed IP address.



## 4.4. P2P or SIP register on IPBX

The **Slim IP Door Phone** can be set to peer to peer (P2P) mode or SIP server mode by setting the DIP switch (page 8). In P2P mode **Slim IP Door Phone** calls IP address in « **memory number**» (page 15).

If you set the **Slim IP Door Phone** to SIP server mode by DIP switch, so add in menu item SIP parameters

LINKCOM  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video
- Help

**Language:**

english Set

**SIP parameters:**

SIP proxy server Address: 1

Port: 5060

Account module Name: 2

Password: 2

Expiration [sec]: 600 3

default values save changes

1 : SIP proxy server IP address or SIP server name and port (usually 5060 or 5061)

2 : Registering data to SIP proxy server

3 : Interval of sending requests for re-registration in SIP server

## 4.5. Setting Audio

LINKCOM  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english Set

**Setting audio:**

Priority 1: G711u

Priority 2: G711a

Priority 3: G726-32bit

Priority 4: GSM

default values save changes

Choose the audio codec priority for SIP calls. There codec are available:

- G711u
- G711a
- G726
- GSM



## 4.6. Setting video

**LINKCOM**  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english Set

**Setting video:**

Image size: 320 x 240

Numbers image per sec.: 2

Brightness: 50

Colour: 0

Contrast: 50

Hue: 0

default values save changes

- 1 : Video display resolution  
2 : Number of picture per second (frequency picture restoring)  
3 : Setting next parameters of camera

## 4.7. Service

**LINKCOM**  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video
- Help

**Language:**

english Set

**Admin services:**

VoIP version: 1.27 UDV version: 2.4

Download log file enhanced log

Show call log

Show register log

**Time server:**

GMT save

**Syslog server:**

save

**Firmware upgrade:**

browse save

**Upload language:**

browse save

**Service password:**

Retype password: save

restart

- 1 : Show firmware version  
2 : Download event log (All, register log or call log)  
3 : Event log (enhanced or basic log)  
4 : ntp server  
5 : External Syslog server  
6 : firmware Upgrade  
7 : Language upgrade  
8 : Admin password change



## 5. Setting Door Phone Parameters

### 5.1. Basic Parameters

**LINKCOM**  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english Set

**Basic parameters:**

**Mode of choice numbers:**

- ☒ Day-Night 1
- ☐ 2 group of numbers

**Hang up phone:**

Code for hang up phone 1: 55 3

Code for hang up phone 2: 66

**Switching between Day Night:**

- ☒ Manually 4
- ☐ Automatic

**Prolongation char:**

- ☒ \* - star 2
- ☐ # - hash

**Code of switching:**

Code for switching Day: 11

Code for switching Night: 10

**Mode of keyboard:**

- ☒ Direct choice number (phone) 5
- ☐ Choice of number from memory

Keyboard to position: 0 6

default values save changes

1 : Select between **Day/Night** mode or **2 Group of Number**

2 : Extending call duration by pressing select \* or # (10 sec before call end the Slim IP Door Phone will send a signal, the called party can extend the call by pressing \* or #)

3 : Not used in version for Slim IP Door Phone

4 : Relay trigger prefix **DAY / NIGHT** mode switching

**Note:** The relay trigger prefix remains even after power failure.

5 : Not used in version Slim IP Door Phone

6 : Not used in version Slim IP Door Phone

### 5.2. Relay management

**LINKCOM**  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english Set

**Relays:**

**Relay 1:**

Relay mode: 1 1

External code day + night: 2

External code day:

External code night:

Internal code from phone: 55 3

Relay closing [sec]: 05 4

Control of incoming call: 5

**Relay 2:**

Relay mode: 1

External code day + night:

External code day:

External code night:

Internal code from phone: 66

Relay closing [sec]: 05

Control of incoming call: ☒

Delay between 1 and 2 in mode 5: 10 6

default values save changes



**1 : Relay mode:**

- 1 = Trigger** mode – Used to trigger the relay when called party dial the **Internal Code phone** (used for electrical locks, gate opening etc.)
- 2 = camera** mode – Trigger on an outside camera
- 3 = lighting** mode – Trigger lighting system based on temporized timeout.
- 4 = bell** mode – Trigger an external Bell.
- 5 = Temporized opening** modes – this mode is available only for relay 2

It has to work together with relay 1, set in mode 1. When relay 1 is activated then relay 2 will trigger after time period set in **t3**. Then the relay 2 is activated for **t2** period.

**Note:** when Relay 1 is activated relay 2 will automatically activated after a Temporized period. Besides that the relay 2 can be separately activated from buttons by Day and Night password.

**2 : Day/Night** password allows you by a combination on the 2 available buttons [2 to 6 digits] to trigger one of the two available Relay and open the gate. Total 3 passwords by relay are available Day/Night Mode then Day then Night mode. If **2 number groups** are selected the programming tables of the Slim IP Door Phone is permanently in **DAY** mode.

Some rules have to be observed when choosing a password: Make sure that Password for relay 1 do not include the same streaming numbers for Relay 2 e.g. relay 1 has 1221 and relay 2 has 12212, mean after reaching combination 4 Relay one will be activated.

**3 : Duration of relay closing in second [2 digits 01-99]**

**4 : To prohibit the control during incoming call it is important e.g. when using relay 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).**

**6 : Time in second between close relays 1 and 2 by mode setting of relay 2 is 5 (gradual opening) [2 digits 01-99]**

## 5.3. Time Parameters

**LINKCOM**  
Be Connected

Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english Set

**Time parameters:**

Maximum call duration [min]: 1 2

Numbers of rings: 2 1

Time between key presses [sec]: 2 3

Time hang up before redial [sec]: 2 4

Time before redial [sec]: 5 25

Audio signaling - opening/closing: ☒ 6

Audio signaling - others tones: ☒ 7

default values save changes

**1 :** max. call duration before **Slim IP Door Phone** hang up, this time can be extended during a call by dialling \* or # .

**2 :** Calls from IPBX to the **Slim IP Door Phone** are authorised, you can set the number of Slim IP Door Phone rings before picking up the call – LED on front panel blinking. The number of ring can be set from 1 to 9.

**3 :** max. time [range 1-9 sec] authorized for password in between button presses  
if time between two presses key is bigger than time set, Password code is not evaluated correctly.  
if the button pressed, is the first password number the dialling is postponed by this time.

**4 :** time [sec] for which the **Slim IP Door Phone** will hang up, before repeated dialling (button pressing during call or dialling, busy tone detection) [range 1-5]


**5 :** Ring Tone Time out after **Slim IP Door Phone** Button 1 or 2 are pressed and the system dial the extension N° if not answered from the IPBX side after this laps of time the **Slim IP Door Phone** will hang up [range 10-99] and then will redial the second Group N° in case 2 groups mode is set.

**6 :** By default acoustics signalling **pick up / hang up** box is ticked, If signalling perturb your IPBX you can cancel it.

**7 :** By default acoustics signalling **Others tones** box is ticked. Signalling is available when pressing key 1 or 2, when doorphone is calling and when doorphone hangs up. If signalling perturbs your IPBX you can cancel it.



## 5.4. Direct Dialling – Memories



Day mode

**Menu:**

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- Service
- Video

**Language:**

english Set

**Memory numbers:**

| Group DAY  |              | Group NIGHT |   |
|------------|--------------|-------------|---|
| Button 1:  | 192*168*1*30 | Button 1:   |   |
| Button 2:  |              | Button 2:   |   |
| Button 3:  |              | Button 3:   |   |
| Button 4:  | 1            | Button 4:   | 2 |
| Button 5:  |              | Button 5:   |   |
| Button 6:  |              | Button 6:   |   |
| Button 7:  |              | Button 7:   |   |
| Button 8:  |              | Button 8:   |   |
| Button 9:  |              | Button 9:   |   |
| Button 10: |              | Button 10:  |   |
| Button 11: |              | Button 11:  |   |
| Button 12: |              | Button 12:  |   |
| Button 13: |              | Button 13:  |   |
| Button 14: |              | Button 14:  |   |
| Button 15: |              | Button 15:  |   |
| Button 16: |              | Button 16:  |   |
| Button 17: |              | Button 17:  |   |

- 1** : Saved GROUP 1 or Day mode telephone extension or IP address. In default setting table memories are empty.  
 When using P2P mode save IP address e.g . « **192\*168\*1\*250** », where « \* » means « . » ,  
 When using SIP proxy server saves the extension number e.g. « **117** ».
- 2** : Saved GROUP 2 or Night mode telephone extension or IP address. In default setting table memories are empty.  
 When using P2P mode save IP address e.g . « **192\*168\*1\*250** », where « \* » means « . » ,  
 When using SIP proxy server saves the extension number e.g. « **117** ».

**Note:** Switching from Day/Night mode remains set in DoorPhone even after power supply failure.

## 6. Electrical Parameters

| Parameter  | Value                       | Conditions  |
|--|-----------------------------|-------------|
| Communication interface                                | Ethernet 10BaseT, 100BaseTx |             |
| VoIP protocol supported                                | SIP                         |             |
| Band width   | 300Hz – 3400 Hz             |             |
| Power supply of lighting through, switches and heating | 12Vss ± 2V , 10-12Vst ± 2V  |             |
| Max. consumption                                       | 300mA                       | 12Vss       |
| 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              |             |