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IP-VarioBell
SIP DoorPhone

IP-VarioBell
IPVB-00, IPVB-01, IPVB-02
IPVB-00C, IPVB-01C, IPVB-02C
VBD5-mod, VBD10-mod, VBDKey

Installation and operating instructions

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Welcome

Congratulations to purchasing a modern SIP based VoIP audio-video door entry phone system, the **IP VarioBell.** This door entry phone system can widely satisfy your needs for communication with visitors of your office, home, school, building, etc.

VoIP means "**Voice over Internet Protocol**" – this door entry system can be connected to an IP network and allows 2 ways of calling. Either in P2P mode (peer to peer) – it means calling directly to an IP adress of other VoIP device or it registers to a SIP server (as a SIP client) and then calls a phone number.

To each call button you can assign 5 phone numbers with possibility of progressive or simoultaneous dialling.

The IP VarioBell is a modular system, surface mounted on the wall or flush mounted into the wall. It can be used outdoors or indoors. It starts with zero, 1 or two call buttons, in audio version without a camera or in a video version with a colour camera. The system can be expanded up to 87 call buttons and it can also have a dialling/door access code keypad. The keypad can uses both modes (dialling mode and door access code lock mode) at the same time.

The IP VarioBell can be powered via a 12V power supply which can power also an electrical lock at your door entrance. It might be also powered via PoE (Power over Ethernet). It is a hands free phone. One of the basic features is the possibility to open 2 doors via connected electrical locks as well as a user friendly configuration via WEB based interface.

The producer progressively improves features of the unit (firmware). The door entry systém „IP VarioBell" allows to upgrade the firmware with the newest version via PC. The latest firmware version can be downloaded from www.alphatechtechnologies.cz .

The neccessary guidelines can be found at page 81. We recommend to use the latest firmware version which brings you new features as well as eventual correction of errors of previous versions. At www.alphatechtechnologies.cz you can also find latest versions of user documentation.

Manual version V3.5 5-9-2016
Valid for firmware – V3.4.xx
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Contents

1 Basic description

1.1 Features

- audio is full duplex with ECHO cancellation
- phone book for up to 999 subscribers with 5 phone numbers for each (max. 87 call buttons + keyboard)
- every subscriber can have more phone numbers with progressive or simultaneous calling
- Email sending when unreachable including attachment with pictures
- 10 time plans with weekly program
- 4 relays. 2 included on the board with possibility to connect 2 independent locks for door opening and 2 virtual (webrelays, i.e. for remote control of an external IP relay or relays synchronization)
- Relays system via synchronization allows combination of any mode (progressive opening, 2 pulses, etc.)
- 10 shared adjustable codes for every relay + every subscriber has own code for every relay
- all versions can use door sensors or exit buttons
- SNMP usage possibility
- real time clocks from NTP or SIP server
- extendable possibilities of buttons functionality, light intensity settings, call duration restriction, etc.
- audio signalling settings, saving own tones or messages
- multilanguage support
- multilevel loading and configuration refresh
- reliable firmware upgrade
- *loging system with possibility of data saving to MicroSD card (under development)*
- *pictures as well as video saving possibility to MicroSD card (under development)*
- WEB inerface management
- power supply 12V or PoE (Class 0 - 12,95W)
- Ethernet – 10/100Mb with standard 10BaseT and 100BaseTx
- The unit starts within 10 seconds
- Linux operating system
- USB connection of integrated webcamera. Video transmission to webbrowser - JPEG, video transmission to VoIP phones - stream H.263, H.264
- SIP connection P2P or PBX (SIP server) system, switchable in the web interface
- SIP 2.0 protocol , define with RFC3261

1.2 Used terminology

- **Incoming call -** Connection between the doorphone and a phone made by selecting an option on the phone. The doorphone connects the call after set number of rings. The doorphone can be programmed from the phone following a connection by inputting a password.
- **Outgoing call** - Connection between the doorphone and a phone made by choosing an option on the doorphone (i.e. Pressing a button).
- **External code** - Combination of 10 buttons or keyboard keys (after pressing the key symbol) for a relay activation. [External = enter code outside the building]
- **Internal code** - Combination of 10 buttons on phone for a relay activation (by DTMF). [Internal = enter code inside the building].
- **Code lock** - Function for relay connections by inputting a combination of up to 10 buttons or keyboard keys (after pressing the key symbol)
- **Ethernet** is technology which is used to build up local networks (LAN)
- **LAN -** Local Area Network (local network) mark PC network which cover small geographical area (for example homes, office, etc…).
- **10Base-T** As transmission medium use twisted twoline cable with rate 10 Mbit/s. It used 2pairs of structured cabling from four.
- **100Base-TX** Version with transmission rate 100 Mbit/s, which is named **Fast Ethernet**. It used 2 pairs UTP or STP cable category 5.
- **Twisted 2line** or also **twisted pair** is cable type which is used in PC networks. Twisted 2line is created by cables pair which are regularly twisted in the length and after pairs are twisted together.
- **UTP**, Unshielded Twisted Pair
- **STP**, Shielded Twisted Pair
- **WEB -** World Wide Web (WWW, shortly **web**), is mark for application of http internet protocol
- **HTTP** (Hypertext Transfer Protocol) is internet protocol design for exchange of hypertex documents in format HTML
- **USB** (Universal Serial Bus) . Modern way of accessories connection to PC
- **Video codec** (compound of word begins „**co**der and **dec**oder“) . Compression **H.263** is derived from MPEG-4, **H.264** is coder for format MPEG-4 AVC. **MPEG-4** is kind of video compression – decreasement of pictures sequence data flow
- **JPEG** is standard method of loss making compression used for savings PC pictures
- **Voice over Internet Protocol** (shortly **VoIP**) is technology allows transmission of digitized voice in body of family protocols **UDP/TCP/IP** pockets via PC network . It is used for calling via internet, intranet or any other data connection.
- **TCP/IP** contents set of protocols for communication in PC network and it is main protocol of worldwide network Internet.
- **IP address** is number which definitely identify network interface in PC network which used IP protocol.

- **DHCP** (Dynamic Host Configuration Protocol) is application protocol from family TCP/IP. It is used for automatic assign of IP adresses to individual computers in PC network. Due this simplify its management
- **Internet** is worldwide system of mutually connected PC networks
- **Intranet** is PC network similiar to internet but it is „private“. It is designed jsut for small group of subscribers (for example workers in some company)
- **PoE** (Power over Ethernet) is powering via data network cable.
- **NTP** (*Network Time Protocol*) is protocol for synchronization of internal PC clocks
- **NAT** *(Network address translation)* is a method of remapping one IP address space into another by modifying network address information in Internet Protocol (IP) datagram packet headers while they are in transit across a traffic routing device
- **STUN** *(Session Traversal Utilities for NAT)* is a standardized set of methods and a network protocol to allow an end host to discover its public IP address if it is located behind a NAT.
- **SIP User Agent** - every SIP user agent (phone, software, device) identifies itself with a string. The syntax of this string is not defined, but a common practise is „device name + version“

1.3 Set of modules

The IP-VarioBell doorphone is a modular system using the latest technology, offers timeless design, easy installation and use.

The IP-VarioBell has two relay switches and it can be powered via PoE. The basic models differ by number of call buttons. There can be zero, one or two call button on the basic module. Then you can either use an audio version without a camera or a video version with a colour camera. The whole systém can be expanded up to 87 call buttons. You can also add a keypad. It can be used as a dialling keypad and at the same time as door access code keypad.

The basic module IPVB-xx can have two call buttons (IPVB-02), one call button (IPVB-01) or zero call buttons (IPVB-00). The models with a colour camera are marked with letter C at the end (e.g. IPVB-02C).

The expansion modules VBDx-mod (the same ones as for the analogue and GSM version of VarioBell doorphone) are available in two types only:

- **VBD5**-mod is a module with 5 call buttons
- **VBD10**-mod is a module with 10 call buttons

A speciality of expansion modules is that numbering of call buttons does not depend on cable connection of the modules. The numbering is set with a DIP switch on each module (see more details later in the text).

The last expansion module is the keypad **VBDKey** – connection of the keypad does not depend on its place of connection (see more details later in the text).

1.3.1 Call button modules

Basic module
IPVB-02

Basic module
IPVB-01

Basic module
IPVB-00

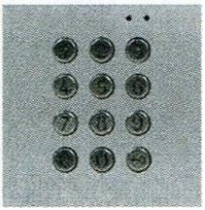
Basic module
IPVB-02C

Basic module
IPVB-01C

Basic module
IPVB-00C

Button module
VBD5-mod

Button module
VBD10-mod



Keypad module
VBDKey

1.3.2 Mechanical parts

Below you can find images of mechanical parts for 1, 2 and 3 modules. In one column there are max. 3 modules.

Flush mounting installation boxes into the wall:

Flush Monting Box -1

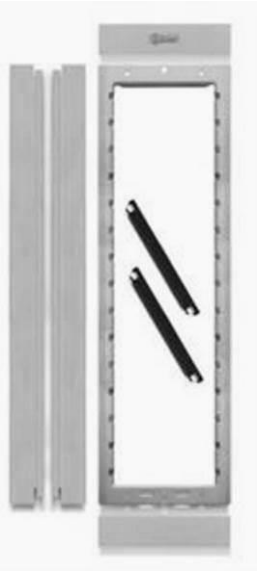
Flush Monting Box -2

Flush Monting Box -3

Mounting Frame – for mounting into the wall and on the wall

for 1 module

for 2 modules



for 3 modules

Rain hood – for flush mounting into the wall

Rain hood -1

Rain hood -2 Rain hood - 3

Surface Mounting Box with rain hood – for installation on the wall (frames are supplied separetely)

SMB -1

SMB -2

SMB -3

1.4 Connection of the IP-VarioBell

The IP-VarioBell consists of the basic board, processor board and it always has two buttons on the board. Number of used call buttons is defined with the used front panel plate. You can connect up to 85 call buttons to the basic board and also a keypad. The basic board also includes two inputs (door sensors or exit buttons) and two relay switches.

1.4.1 IP-VarioBell basic board

The basic board is the same for all models of the IP-VarioBell. It only differs with included or excluded colour camera module. In the basic configuration there is always a PoE module included (according to IEEE802.3af norm), also there is a connector for connecting expansion modules, LED illumination of a name card, reader of MicroSD cards and two relay switches.

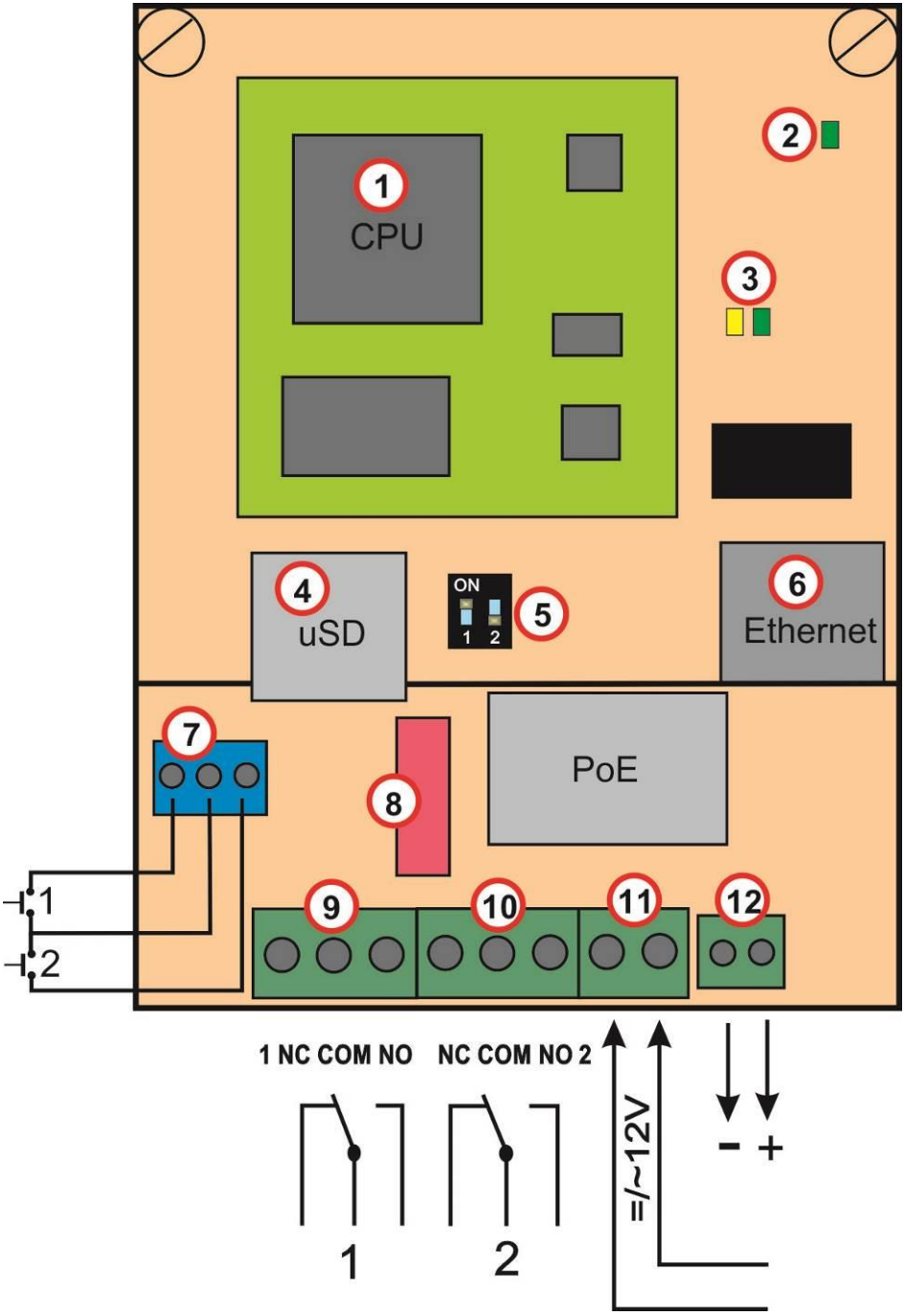
All operational and connected parts are marked with a digit inside a red circle.

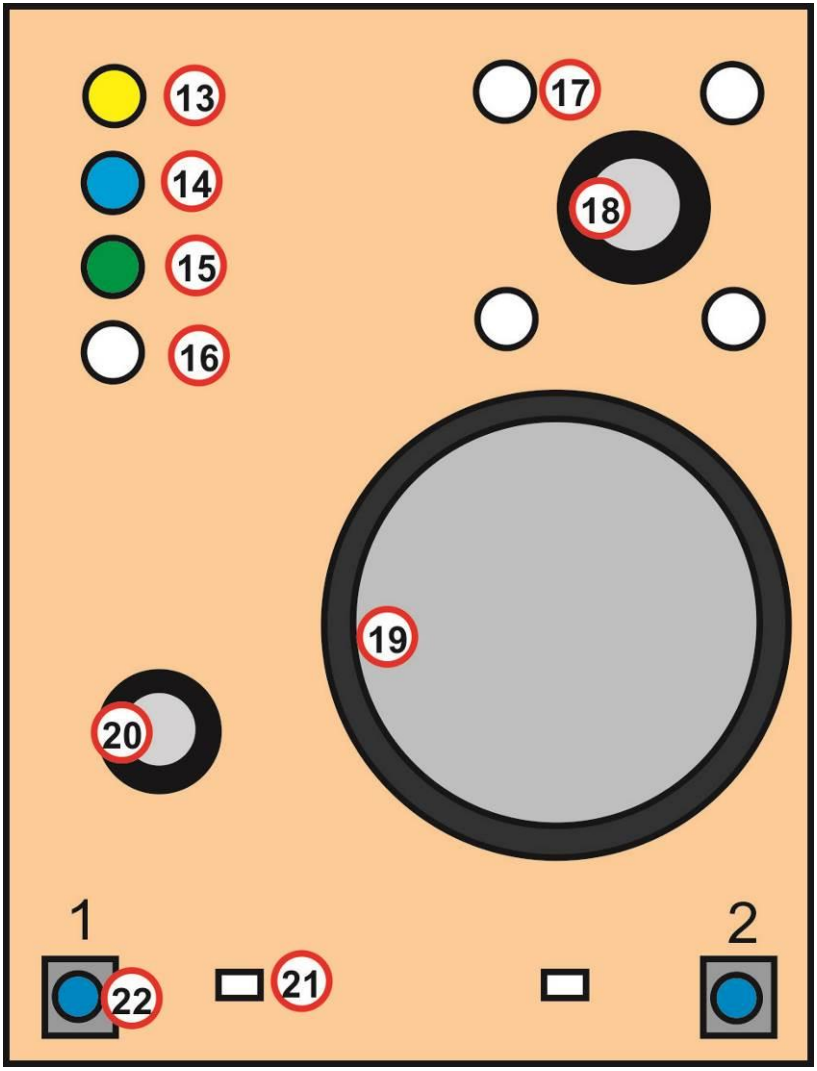
1. CPU board (proccessor module)
2. LED green – powering of the doorphone works fine
3. LED for checking of network activity, green = 100M LAN connected, yellow = data transmission on the LAN
4. Slot for a MicroSD card – insert the card before powering the doorphone. Never take out the card during doorphone´s operation!
5. DIP switch

   1 – always is **ON** position (used for factory service only)
   2 – **OFF**. In case it is in **ON** position when you power the unit, the doorphone goes to a default IP address 192.168.1.250 and also to its default style (a rescue mode). The user name is *admin* and the access password is *1234*. To display a video stream, the user name is *video* and the password is *1234* (if it is required). The operation position of the DIP switch 2 is **OFF.**
6. Connection of the UTP cable (Ethernet, LAN, network)
7. Two inputs (the middle connector is common for both inputs) for door sensors or exit buttons (programmable, need to be ordered in production in advance before delivery)
8. Connection of **cable K0** for expansion module(s) – a flat cable, on one side there is an orange connector, on the other side there is a black connector
9. Terminal connector of the switching contact of **the first relay** (NC = normally closed, NO=normally open and COM=common, the middle connector)
10. Terminal connector of the switching contact of **the second relay** NO=normally open and COM= common, the middle connector)

11. **Input** for powering of the IP-VarioBell 12V AC / DC (max. power consumption approx. 300mA). A direct current (DC) power supply is recommended
12. Output 12V DC, max. 300mA, for example for powering of a low consumption electrical lock if PoE power supply is used for the IP-VarioBell


1
CPU
2
3
4
uSD
ON
1 2
5
6
Ethernet
7
8
PoE
9
10
11
12
1
2
1 NC COM NO
NC COM NO 2
1
2
=/~12V
- +



13. Yellow LED shines when the doorphone rings or establishes and finishes the connection (establishing a connection).
14. Blue LED shines when the connection has been established and you can talk (Active Call).
15. Green LED shines when one of the relays has been activated (Door open).
16. Sensor of an ambient light for illumination control of the camera and name cards
17. White LED for illumination of the surrounding area in front of the camera (used at models with a camera only)

18. Camera objective (only models with a camera). Diagonal view angle is 120°, max. resolution 640x480.
19. Speaker
20. Microphone
21. White LED for illumination of name card
22. Call button 1 and 2 – available on each board. Depending on the selected front frame module you can use zero, 1 or two call buttons.

1.4.2 Power supply - terminal (10)

The **12V** power supply can be **direct (DC)** or **alternating (AC)**, the polarity does not matter. You can consume max. 300mA from the 12V power supply.

You can also use the power supply for powering the electric lock. In this case it is suggested to use a 12V/1A power supply.

You can also use a **24V DC** power supply. The use is mainly at the installation site, where such kind of a power supply already exists and it is already used for the attendance/access control system or the sliding gate or similar type of use. In this case you must not use AC, but you are allowed to use a DC power supply only. The polarity does not matter.

1.4.3 Exit button, door sensor – terminal (7)

The exit button serves for direct control of the switches. Each switch can be set to one or two pulses. The button (terminal (8)) is connected to a 12V loop current circuit (terminal 6). This makes it possible to connect the exit button with a cable up to 500m long.

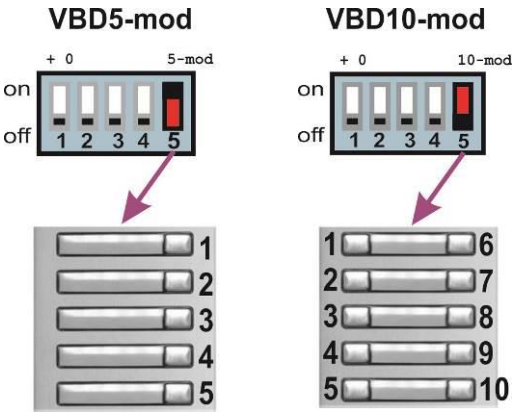
1.4.4 Button extension bus

This bus allows you to connect extension call buttons up to 87, including the keyboard. In addition to the serial data transmission, the bus also powers the ilumination of name cards and name/house number modules.

The call buttons module is supplied in two versions:

VBD10-mod can use 10 call buttons – 5 of the left side and 5 on the right side

VBD5-mod can use 5 call buttons – only 5 on the right side



The keyboard **VBDKey** can be connected to the bus at any place.

1.5 Connection of expansion modules VBD10(5)-mod

The **VBD10-mod** call button expansion modules come with ten call buttons and the **VBD5-mod** call button expansion modules come with with five call buttons. However, the way of numbering is crucial. The physical connection can be random, you can interconnect the modules as you wish on regardless of the numbering!

The numbering of call button modules will be explained later on. The numbering is setup on each call button module using the DIP switch **(E6)**.

The VBDx-mod electronics board only connects to the original A-VarioBell key module by means of the terminal block **(E5)** and the interconnecting three-wire cable **(E4)**. The connector **(E7)** is not used with IP-VarioBell.

The connection is made using **K1** flat cable (two black connectors at both ends) and the **K0** cable only serves as a connection between the base module and the first button module or keypad (on the one side orange and on the other side the black connector).

(E1) is a connection to the basic module (K0 cable) or connection to the previous button module (cable K1), **(E2)** is the connection of the following button module (K1 cable), **(E3)** is the connection between the call button modules (cable K1)

1.5.1 Cable K0 / K1

Cable K0 – on one side orange connector, black connector on the other end - serves only to connect the first expansion module to the base module

Cable K1 – on both sides black connector - serves for interconnection between expansion modules

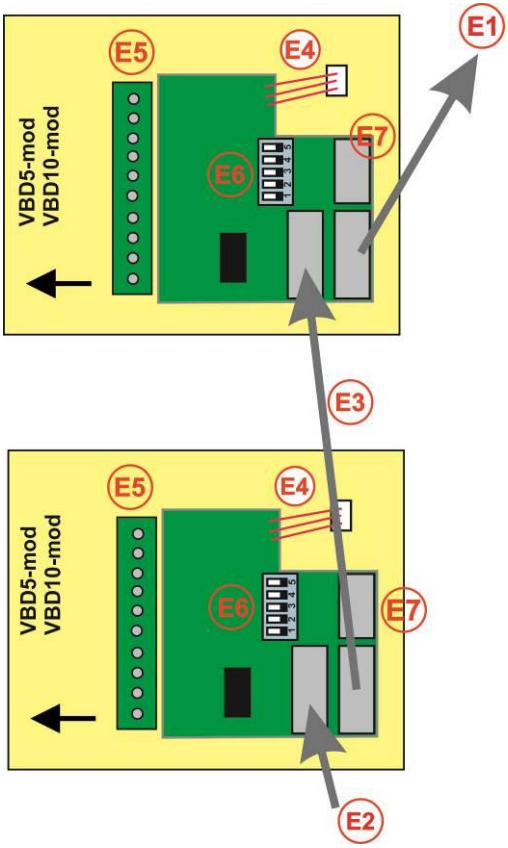


Fig. 1 Interconnection between VBD10-mod and VBD5-mod

1.5.2 Example of connection of VBD10-mod modules

The connection is made using a flat cable K1 / K0. In the example, a basic module with two buttons is used and the VBDKey keypad module is also used in the connection. The module numbering is set using the DIP switches **(E6)** shown next to the appropriate module. The button numbers then correspond to the description in the left column next to the modules. The keyboard module is detected automatically and nothing needs to be set, place of the connection is variable as you need. If the cables K1 were connected to the jump (i.e. variably as you need), nothing will happen and the numbering will be retained (given by the DIP switch on the relevant module).

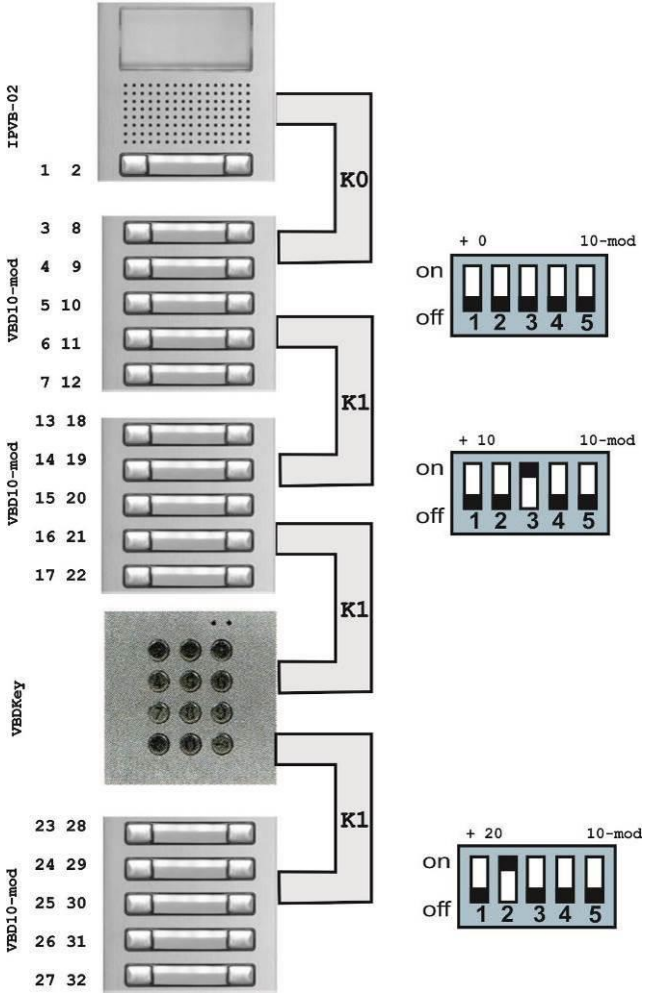


Fig. 2 Interconnection of IP-VarioBell and VBD10-mod

1.5.3 Example of connection of VBD5-mod modules

The connection is made using a flat cable K1 / K0. In the example, a basic module with two buttons is used and the VBDKey keypad module is also used in the connection. The module numbering is set using the DIP switches **(E6)** shown next to the appropriate module. The button numbers then correspond to the description in the left column next to the modules. The keyboard module is detected automatically and nothing needs to be set, place of the connection is variable as you need. If the cables K1 were connected to the jump (i.e. variably as you need), nothing will happen and the numbering will be retained (given by the DIP switch on the relevant module).

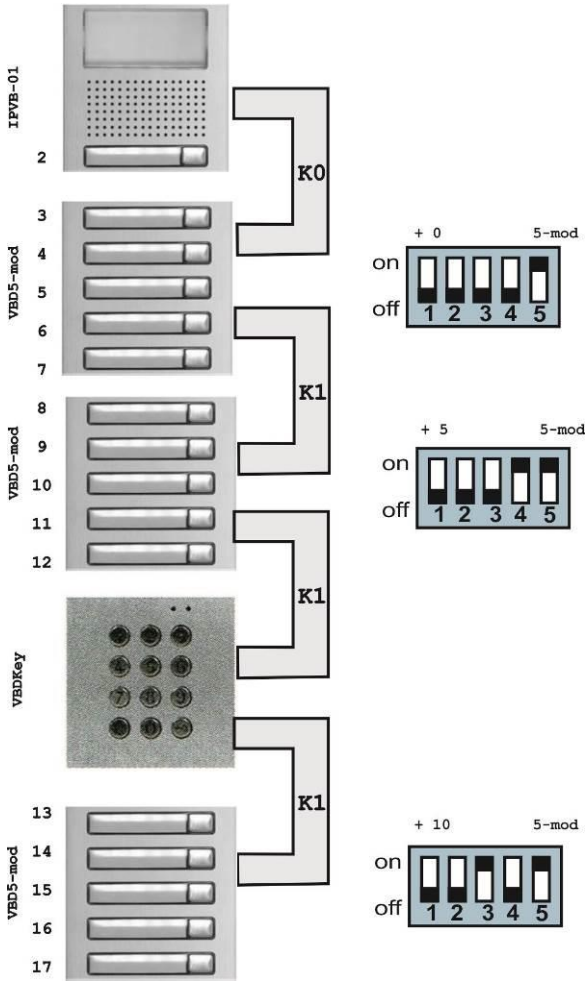


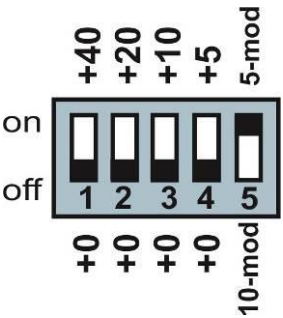
Fig. 3 Interconnection of IP-VarioBell and VBD5-mod modules

1.5.4 Call buttons numbering

Call buttons numbering **depends** on the DIP switch setting on each call button module.

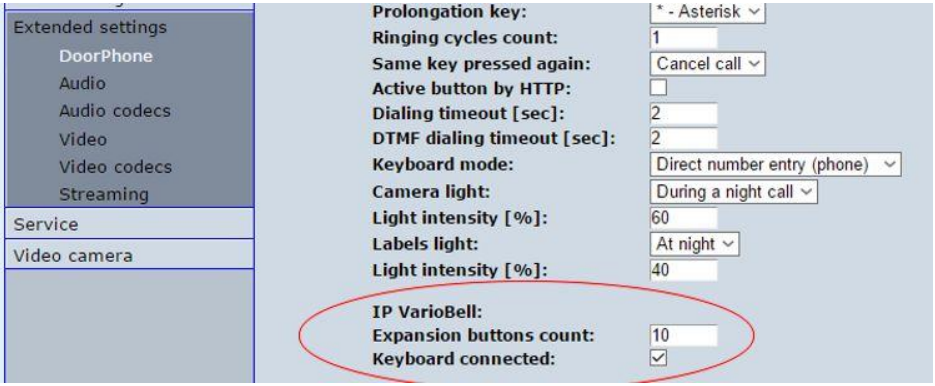
The numbering **does not** depend on the way (connection order) of each call button module.

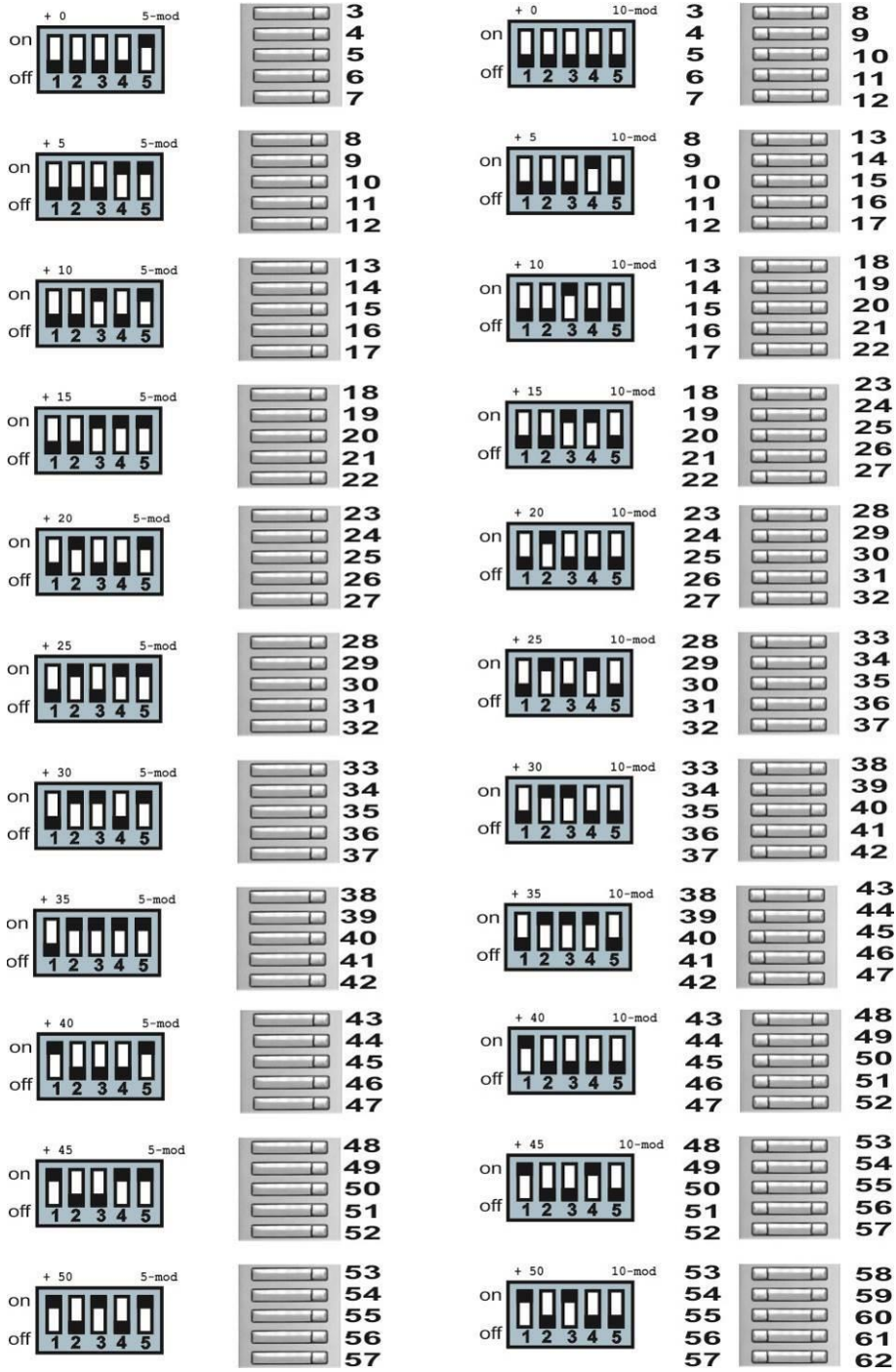
Setting the DIP switch **(E6)** on the call button module.
The individual DIP switches have this meaning:



DIP 1 – 4 = setting the number of previous button call buttons (the basic module **is not** included !!)
DIP 5 = setting your own module depending if the front panel has 5 or 10 call buttons

In the doorphone setting, you must set the connected number of call buttons (this way the number of entries in the phone book is determined), but the call buttons on the main panel **are not included** in this number. The first two phonebook entries are always dedicated for the base module call buttons and it does not matter whether they are in use or not in use on the front panel of the base module.




+ 0
5-mod
on
off
1 2 3 4 5
3 4 5 6 7
+ 0
10-mod
3 4 5 6 7
8 9 10 11 12
+ 5
5-mod
8 9 10 11 12
+ 5
10-mod
8 9 10 11 12
13 14 15 16 17
+ 10
5-mod
13 14 15 16 17
+ 10
10-mod
13 14 15 16 17
18 19 20 21 22
+ 15
5-mod
18 19 20 21 22
+ 15
10-mod
18 19 20 21 22
23 24 25 26 27
+ 20
5-mod
23 24 25 26 27
+ 20
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23 24 25 26 27
28 29 30 31 32
+ 25
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38 39 40 41 42
43 44 45 46 47
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43 44 45 46 47
+ 40
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43 44 45 46 47
48 49 50 51 52
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48 49 50 51 52
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10-mod
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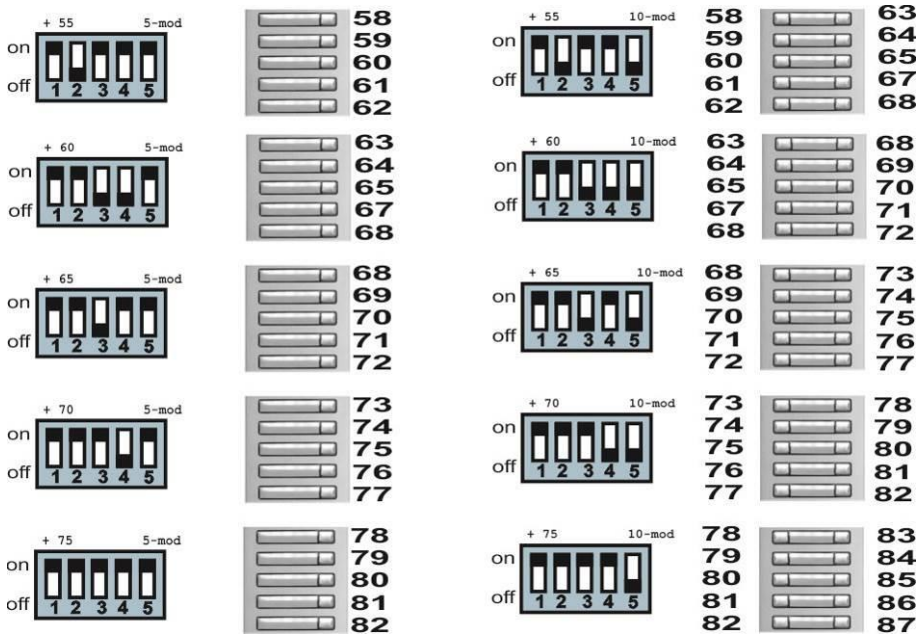
58 59 60 61 62



The modules are numbered in the figure above, on the left side there are modules with 5 call buttons VBD5-mod and on the right side there are modules with 10 call buttons VBD10-mod.

The module with the desired numbering can be found in the figure above and on the left side of it there is a combination of the DIP switch **(E6)** you have to set on this module.

To set the number of call buttons (number of phonebook entries) correctly, you need to set the number of connected call buttons in the menu of the doorphone

The numbering is independent of the order of connection of the call button modules with K1 cables

If you connect to the system two call button modules with the same DIP switch setting, nothing will happen, but both modules will have the same call button numbers and therefore the same function.

For Keyboard module, you need to set the keyboard presence in the menu settings (the phonebook will expand to 999 entries)

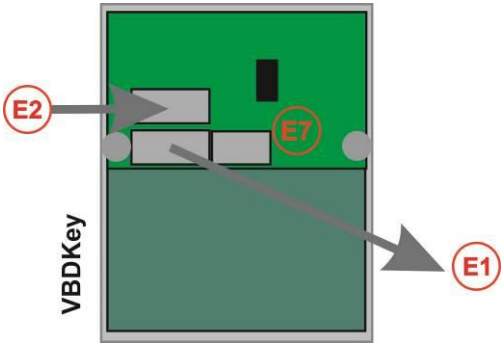
If you connect two keyboards to the system, they will both function and perform the same function.

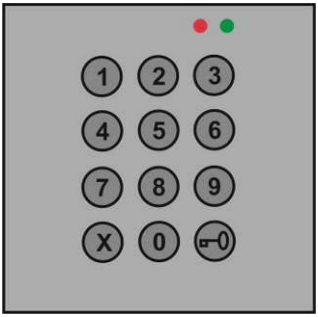
1.6 Connection of VBDKey keyboard

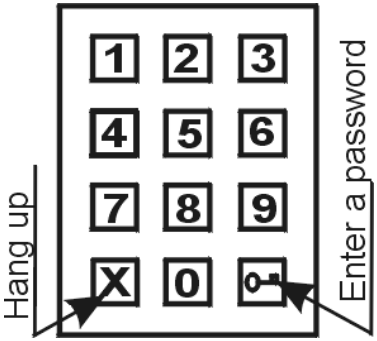
The keyboard module is connected by a flat cable as well as the VBD10 (5)-mod modules.

The connection is made using the flat cable K1 or cable K0. **(E1)** is a connection to the base module, **(E2)** is the connection of the next call button module.

The connector **(E7)** is not used for this version of IP-VarioBell.







The selection is entered by successive pressing the numeric keys, remember that the password key symbol must be pressed first. To hang up the call, the symbol can be pressed at any time, or this symbol also cancels the process of entering numbers (Cancel).

The code lock can be entered both by pressing the keypad after the key symbol is pressed, or by pressing the combination of the first ten call buttons (call buttons 1-10, where the call button 10 = in the code 0)

The keypad has two basic dialing modes.

- Direct dialing of phone numbers - numbers are dialed on the keypad as on the phone
- Doorphone´s memory selection - on the keyboard only one, two or three-digit number is selected = memory address (1-999). This method saves the attached call buttons; for multiple subscribers, it is more advantageous to use several direct dialing call buttons and the keypad in memory dial mode than to create a huge set of call buttons.

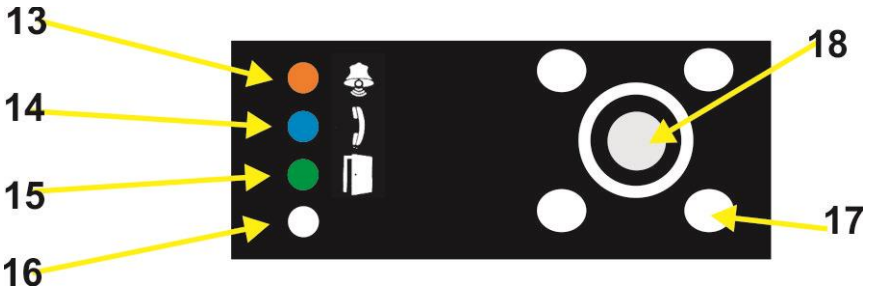
  Note: The call button 1 on the base panel addresses the same phone number memory as a choice 1 on the keyboard - there are only 999 memories in the

doorphone, and each phonebook entry can contain up to 5 phone numbers (i.e. up to 4995 phone numbers)

For keyboard module, you need to set up (tick on / enable) a connected keyboard on the Doorphone page

If you connect two keyboards to the system, they will both function and perform the same function.

1.7 Signalling on the front panel of the base module

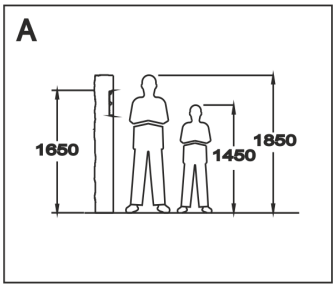


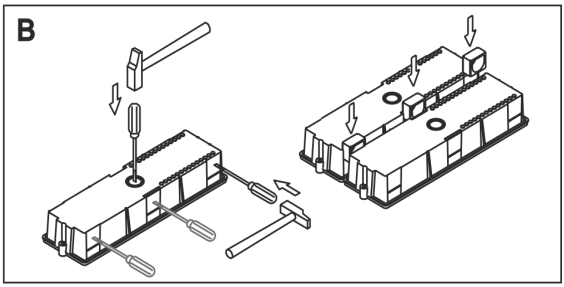
The IP-VarioBell housing lets you indicate the status of the doorphone in the base module window. This is usually used for hearing impaired visitors.

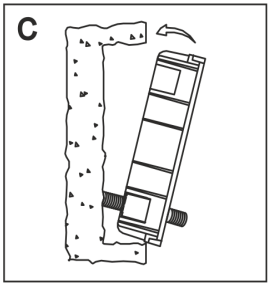
- The bell symbol **(13)** - the yellow LED lights up when the doorphone rings or establishes and ends the connection (Establishing connection).
- The phone symbol **(14)** - the blue LED lights up when the connection is established and you can talk (Call active).
- The door symbol **(15)** – the green LED illuminates while at least one of the two switches is activated (Door Open).
- The LED sensor **(16) -** an ambient light sensor is placed here to automatically turn on visit card backlight and camera illumination.
- White LEDs **(17)** are used to illuminate the area in front of the camera (camera models only)
- **(18)** the lens of a color camera on a model equipped with a camera

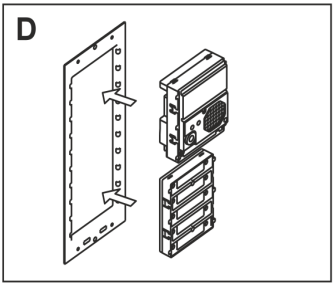
2 Installation

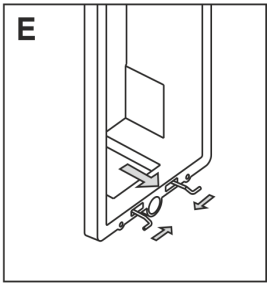
2.1 Assembly

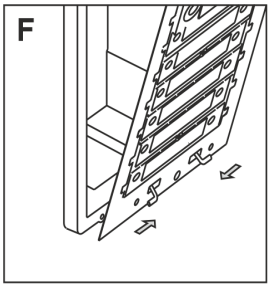


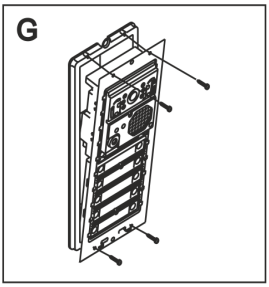


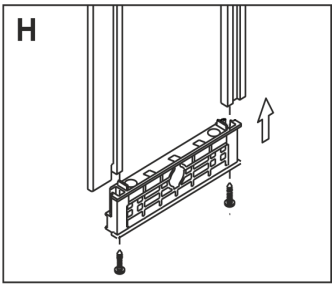


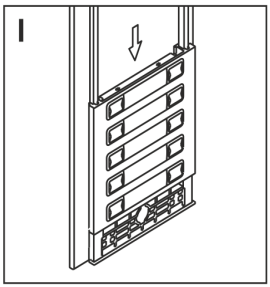


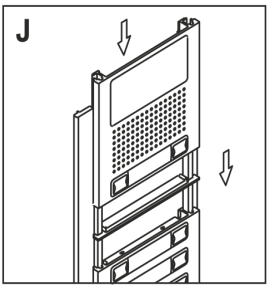


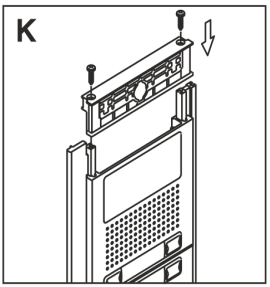








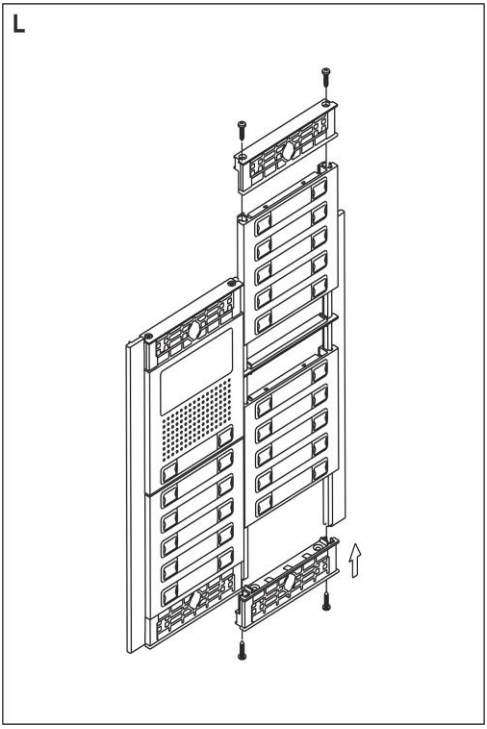


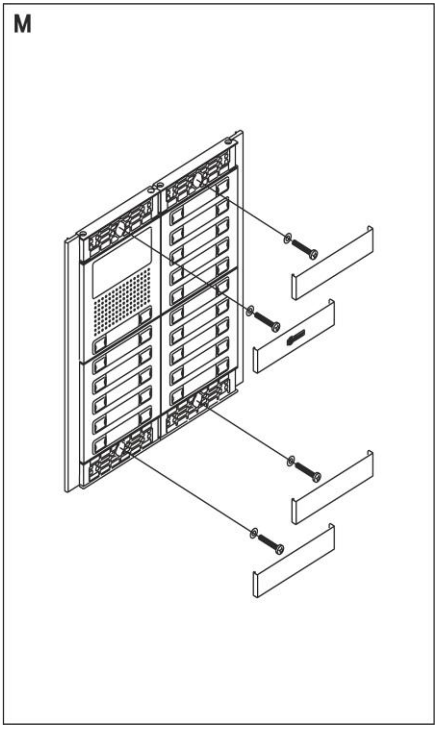


Mounting/assembly process:

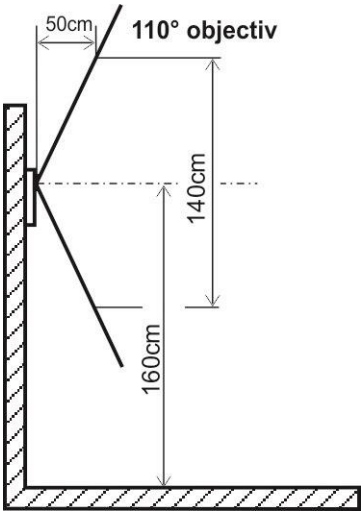
Modules	1	2	3
Height mm	**140**	**257**	**374**
Width mm	**125**	**125**	**125**
Depth mm	**56**	**56**	**56**

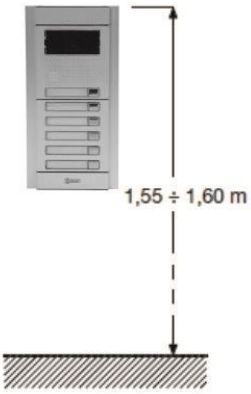
Description of the flush mounting into the wall, which is more complicated:
A. Prepare mounting holes in the wall. Recommended height is at around 160cm from the ground. Dimension of holes for flush mounting boxes depends on required number of modules. We mention dimensions for 1, 2 and 3 modules (basic mounting boxes). Bigger sets with more than 3 modules are completed by combining basic mounting boxes (under or next to each other)
B. Prepare the flush mounting box for cables and mutual connection of flush mounting boxes
C. Fix the flush mounting box into the prepared hole inside the wall
D. Insert modules into the fixing frame (fixing frame is a part of assembly set)
E. Insert spring to the bottom part of the flush mounting box
F. Insert fixing frame into the spring in the flush mounting box
G. Install the fixing frame to the flush mounting box with 4 screws (screws are supplied – part of delivery)
H. Complete the design frame (part of assembly set) – firstly use screws to assemble the side rails with the bottom part
I. Insert the front panels into the design frame according to the individual modules used in the configuration
J. The last module (the module on the top) slides into the design frame
K. In the end use screws to assemble the top part to the design frame (into the side rails)
L. Such a completed set as shown on pictures H+I+J+K is ready for installation into the flush mounting box
M. The last step is to insert covers on the design frame





Placing the IP-VarioBell doorphone on the wall



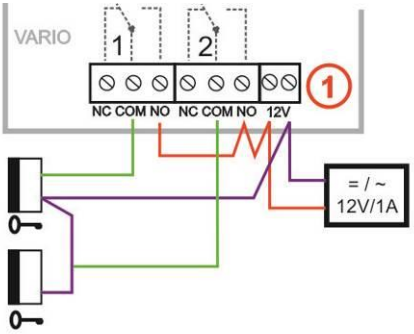


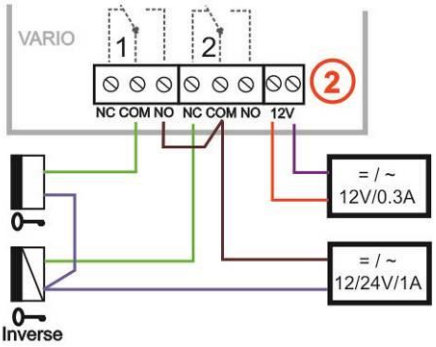
2.2 Connection of switches

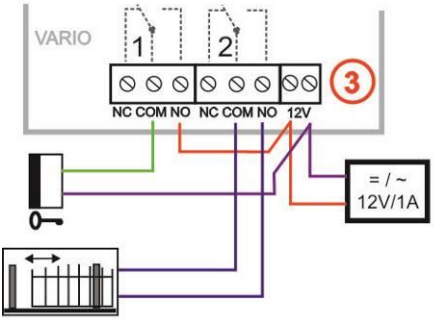
Examples of switches wiring can be found on the following page, they are not covering all possible options for connecting the switches but give you instructions on how to connect individual circuits (red rings with numbers = numbers of the examples).

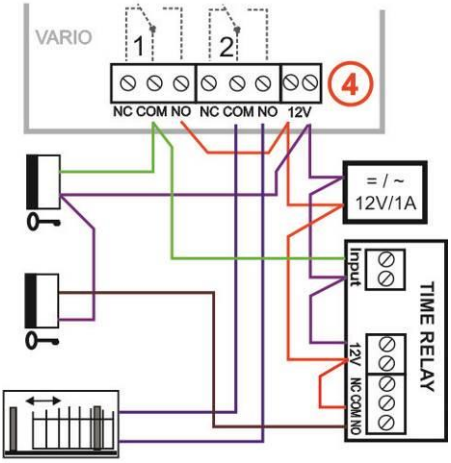
1. Basic wiring - 2 electric locks and the possibility of controlling two doors independently (mode of switches 1 and 2 is monostable) - this scheme also applies to the gradual opening of the door. This connection is the most common, one common power source powers the IP-VarioBell and two electric locks. The current load of the power supply depends particularly on the type of electric locks used. The standard electric lock has a current consumption of 0.6A - 1.0A, and it is also necessary to consider whether it is probable that both switches of the electric locks will switch on simultaneously. If not, the source of 1A is enough if you use low consumption electic locks. In other cases please choose a power supply source of 2A instead. If you use low consumption electric locks, the 1A source is fully compliant.
2. Two sources - the possibility to use independently two power supplies, one for the IP-VarioBell and the other for electric locks. The electric lock 2 is inversely connected (fire escape door).
3. Combination of doors with electric lock and sliding gate in the fence.
4. Extending the previous example to two doors with a gradual opening (this function is set in the TimeRelay – an external module)
5. Combination of electric lock and auxiliary bell. The auxiliary bell switch can be in the call switching mode (responding to all call buttons) or switching the switch from the selected call button, then the switch responds to only one selected call button.
6. Switching lighting (e.g. way to the building) by the 1st switch (setting the switch based on the call). The 2nd switch - control of weekly plan of e.g. heating - the time profiles table synchronizes the selected switch. Attention! A contactor must be used (the IP-VarioBell **must not** switch 230V!).

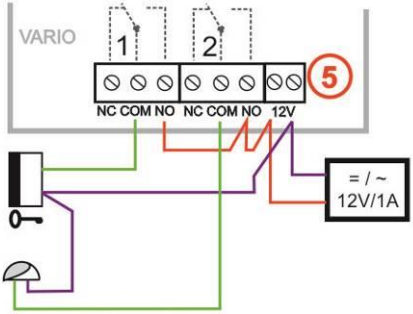
Examples shown on the figures below are just basic principles.

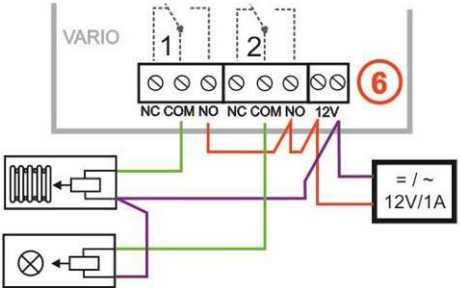

VARIO
1
2
NC COM NO NC COM NO 12V
1
= / ~
12V/1A


VARIO
1
2
NC COM NO NC COM NO 12V
2
= / ~
12V/0.3A
= / ~
12/24V/1A
Inverse


VARIO
1
2
NC COM NO NC COM NO 12V
3
= / ~
12V/1A


VARIO
1
2
NC COM NO NC COM NO 12V
4
= / ~
12V/1A
Input
12V
NC COM NO
TIME RELAY


VARIO
1
2
NC COM NO NC COM NO 12V
5
= / ~
12V/1A


VARIO
1
2
NC COM NO NC COM NO 12V
6
= / ~
12V/1A

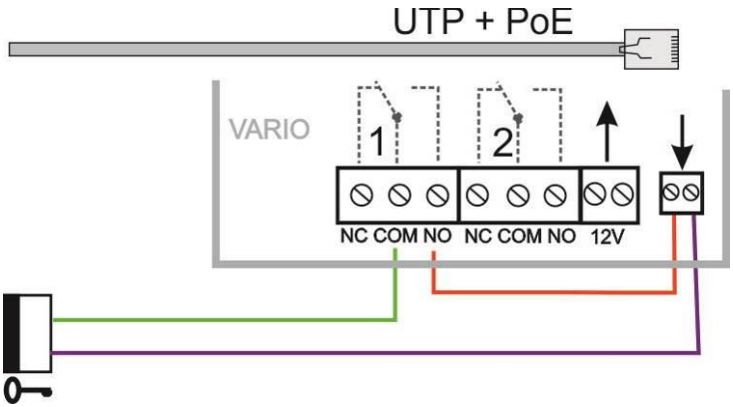
2.2.1 PoE supply

The IP-VarioBell is equipped with a PoE power supply circuit via the UTP cable. If you have a PoE power switch or you have a PoE power supply (a box of the size of the AC adapter plugged into the UTP cable - according to the IEEE802.3af standard), then you do not need a 12V power supply for the doorphone operation.

If you use an electric lock to open the door, you must use a power supply adapter (only in the relay contact circuit) or use a low-consumption electric lock and then use the output terminal "12V output" (the terminal marked **"12"** on the main board). When you use a PoE power supply, there is 12V / 300mA available.

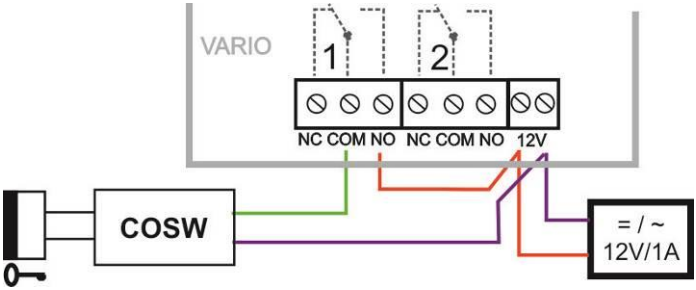
Attention, make sure that both electric locks will not be active at the same time.

This can be achieved by, for example, synchronizing the switches and setting the door's successive opening (the setting is described later on in the chapter on the switch settings)



2.2.2 COde relay SWitch (COSW)

A code relay function is available for the switch (**COSW-**COdeSWitch). It serves primarily to ensure the transmission of information on the electric lock switching. When using this function, it is not possible to activate this lock by attaching or disconnecting the voltage to the electric lock leads. Activation is only performed when the serial information transmitted between the IP-VarioBell and the code relay switch board is in agreement.



In the IP-VarioBell, you can set the Security code for the output to activate the code relay switch board.

The code information is 8 bits, but the code entry is 4 bits with 4 bits of security, which is a total of 8 bits. Practically, this happens by activating the switch first by transmitting the serial code and if it matches, the code relay switch board will connect the electric lock.

⚠ The code relay switch boards can be connected in parallel and thus extend the number of switches, but you can never combine the electrical lock and the code relay switch board in parallel !!

2.2.3 Use of door sensors – exit button

Maximum **two door sensors** can be connected to the IP-VarioBell doorphone. It serves to re-transmit information on the closed door. This information is displayed on the home screen (under the camera image) and also it is transferred to the UDVguard applications. Another option is to use SNMP.

The door sensor is either a part of the electric lock, or it is a conventional magnetic contact used in the security systems. It is connected as an **NC** switch on the terminal block **(7)** - just like the alarm magnetic contact (door closed = closed).

Inputs for door sensors can also be used as **exit buttons**. In the IP-VarioBell setting, you can select which switch controls this input. Actually, the NO button is connected to the input and switches the switch in monostable mode for the time period when the switch is switched on.

2.2.4 Micro SD card

The microSD card is used to store user audio files, and in the future it will be possible to store photos, videos, and audio on the MicroSD card as to an answering machine.

If you select a user tone and the microSD card is not inserted in the doorphone, the default alert tones will be used.

 **Never eject the SD card while the doorphone is in operation!**

3 Service of the IP VarioBell

3.1 Signalling overview

The IP-VarioBell doorphone signals acoustic states that can occur during operation, additional signaling is by means of two-color LED (located to the right under black plexiglass). The acoustic signaling for each state listed in the table below can be turned off or the default beep tones are used and / or replaced by user sounds.

Status	**Tone**	**LED**
Call start	Adjustable / user programmable	Yellow
Call end	Adjustable / user programmable	switches off
Call is not possible (busy)	Adjustable / user programmable	Yellow
Access code entry confirmation	Adjustable / user programmable	Blue
End of call notification	Adjustable / user programmable	Blue
Relay closing	Adjustable / user programmable	**Green ***
Error	Adjustable / user programmable	-
Pressing the call button	Adjustable / user programmable	-
Establishing a call connection	-	**Yellow**
Connection is established - call	-	**Blue**
Service mode (start boot)		Blue
Linux start		Yellow
Start a rescue WEB		Yellow-blue flashes

* - Indication is conditional upon switching on the acoustic signaling of the respective switch

3.2 Visitor at the door

A visitor at the door is a person outside the building who wants to enter the building.

3.2.1 Pressing the call button – outgoing call

Call buttons of the doorphone are provided with name or function labels of persons inside the building.

The incoming person (visitor) will press the corresponding call button, the doorphone will initiate the call either immediately (in case the call button is not the first access code number) or with a delay (the time between call button strokes) to dial the programmed phone number. The dialed number varies according to the settings in the phone book:

1. Phone book position for the selected call button must be permitted
2. Must be filled min. 1 from 5 phone numbers (or IP adresses in P2P mode)
3. At the filled phone number there is an active time plan in appropriate time or there is no time plan is selected.

If more than one phone number is filled, the selection of the phone number is narrowed according to the time schedule and then the numbers are dialed either in the order (1 - 2 ... 5) or they can be dialed simultaneously.Based on the number that will be picked up first, so the specific call will take place. Both dialing options can be combined, e.g. you can call the 1st and 2nd phone number at the same time, and if the call does not take place within the selected time, it is called to the 3rd phone number.

Repeated pressing of the same button can have these functions:

- Nothing happens
- Dials again
- Ends the call

Since firmware version 3.0.38, the IP-VarioBell doorphone has a new feature. When Since firmware version 3.0.38, the IP-VarioBell doorphone has a new feature. When "SIP Ringing" or "Session progress" comes, it does not connect the audio, but lets ring local ringing. However it interconnect the video if it is offered by the counterparty. This makes it possible to see who is standing at the door with the appropriate IP videophone (e.g. the Grandstream GXV3275 - the "Preview" button) and whether or not to let the visitor go inside the building without any audio or sounds change at the IP-VarioBell doorphone.

.

3.2.2 Pressing the call button – code lock

The IP-VarioBell call buttons also have a code lock function. By consecutive pressing of call buttons, the corresponding relay switch can be activated. The codes for this feature are common to all users (see relay switch settings) and also individual (each user has his private door access code in his phonebook). Note that the door access code can be compiled only from the numbers of the available call buttons as well as from the keypad numbers (after pressing the "key" symbol on the keypad).

If the call button number is the first number of one of the door access codes, the call from this call button is delayed by the "time between the keystrokes" to evaluate the door access code.

Note there is also a relay switching function by pressing the selected call button (e.g. for the bell function). This function can be set in the relay switch settings (web interface menu - basic settings - relay - direct ON button).

3.2.3 Call

Door entry IP VarioBell has adaptive ECHO canceller. The Echo dissapear usually within first 5 seconds of call. The call is then full duplex. The end of call happen:

- Called party hang up
- Call duration time is over (when is setup)
- By button press(when is setup)

3.3 Visitor inside building

By person inside building is person who is in communication with door entry IP VarioBell.

3.3.1 Outgoing call

Outgoing call is call from door entry (start by visitor). After door entry dial is ringit phone inside the building. When call is picked up you can talk to visitor at door and by code dialling you can activate relay. Door entry sends 10sec before call end notification about time limit of call and by dial character (* / #) you can prolong the call. By phone hang up the call is ended.

All transmission ways of info about button press are available (for example code to activate relay) – either in "RTP channel – RFC2833" or in "SIP info" and "inband DTMF".

3.3.2 Incoming call

Incoming call is call to door entry (start by person inside building). After dial of extension number or IP adress where is connected door entry IP VarioBell the door entry is ringing and after preprogrammed number of rings picks up the call. You can talk. Possibilities are the same as outgoing call (activate relay, prolong the call etc.).

3.4 Video

At models with camera is possible received video as follow:

- IP phone with LCD display
- PC – WEB browser
- PC with programm UDVguard (www.alphatechtechnologies.cz)
- PC with general programm for video watching (for example VLC)
- Android device (smart phone, tablet) UDVguard (Google Play)
- Apple device (smart phone, tablet) UDVguard (iTunes)

Video formats: JPG, MJPG, H.263, H.264

Video for WEB:

I**nternet Explorer, Mozilla, Opera, Firefox…** - (set of JPG pictures - Port 80) it is used repeated http request „IPaddress/video.jpg“

programm PopUp (UDVguard) - (MJPEG stream - Port 80) is used http request „IPaddress/video.mjpg“ (sometimes is reload necessary to run).This video is more fluent and has less network strain.

Stream video for IP phones:

H.263 and H264 is established by IP VarioBell door entry and IPvideo phone over SIP/SDP protocol on standard SIP port. The video (as same as sound) then runs by RTP protokol on ports agreed over SIP (usually 9078).
rtsp request „rtsp://IPaddress/video.264“
or rtsp request „rtsp://IPaddress/video.263

Video parametres:

JPG Pictures are created in IP modul and for all transmit protocols are the same .The Size (resolution) of video is selected in "Video setting" on WEB. Maximal resolution is defined by USB camera type and mostly is 640x480 Stream H.263 knows CIF resolution (352x288). It means bigger JPEG is cut and smaller framed.
Frequency (1-15 picture./sec) JPG Picture is selected in "Video setting" on WEB.
Frequency MJPG and Stream H.263 coming from camera. It is used every second and reset is between 7-15 pictures/sec. Higher resolution brings decreasement of Pictures/ sec. (limited by processor efficiency)

Ports:

Port **80** for http (WEB pages even JPG / MJPG video on them)
Port **5060** for SIP
Ports RTP with oposite party communicates over SIP. Usually Port **7078** suggested for audio and Port **9078** for video
Port **554** video(H264 and H263) provided by door entry (server) protocol RTSP

4 Parametres programming

Parametres programming is performed by ordinary WEB browser.
(Caution! version of IE V7 and lower are not supported).

4.1 WEB interface access

For successful display of WEB interface of IP VarioBell door entry we go through some details.

Field length- names, titles, codes, passwords have fix length **40 characters**.
- URL and etc. have max length **255 characters**

4.1.1 What you should know

In doorphone IP VarioBell is a double DIP switch. Individual switches should be in the positions shown.

1 – on
2 – off

Meaning of each switches:

1. Always position **on**, this switch is only used in the manufacture or repair service.
2. If the position **on** at power (or reset) so in doorphone is set the default IP address 192.168.1.250 and uses the default style. The name is *admin* and the password is *1234*. To see the video is the name *video* and password *1234* (if required). **The operating position is off**.

Warning: If you get into a situation that you do not know the IP address set in IP VarioBell or have forgotten your password, so there is reason to use the **DIP2** switch, switch it to the **ON** position and restart IP VarioBell. Then you change the settings eg. Passwords or network settings. Remember to switch DIP2 into operating position **DIP2 = off** and click save and restart. After rebooting, IP VarioBell is now all set according to the changes.

You should also dedicate attention into which PC network you are connected. Default door entry IP address is 192.168.1.250.

When is your PC in network setup also on segment 192.168.1.xxx then might caused a problem in network just by same IP address etc. 192.168.1.250.

In this case we recommend temporarily disconnect device from network.

When your PC is setup to different network segment than 192.168.1.xxx two possibilities are available:

1. In PC you have system Windows 7 or 8, then you can setup „network setting“ – „Protocol IP version 4“ – „Property“ – specify“ and here add IP address in PC segment of door entry for example. 192.168.1.10

2. Generally in PC setup you program temporarily own IP address.In PC door entry segment for example 192.168.1.10. After change of door entry IP address you have return setting in PC back.

Then you can setup parameters of door entry including IP address and after restart of IP VarioBell door entry you can login to door entry WEB page on new IP adress.

4.1.2 Login

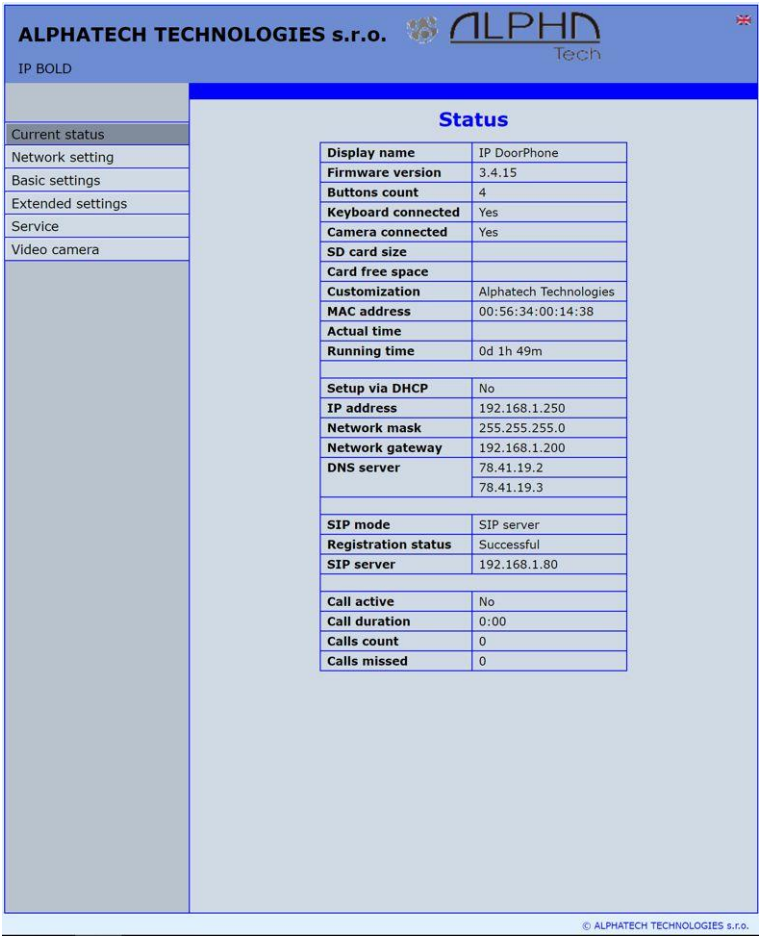
In your WEB browser write IP adress of IP VarioBell door entry in default it is **192.168.1.250**. you can see picture from camera as bellow – „home screen with video"

Under picture from camera (at models without camera is empty frame only) are on the left buttons **Stop** – to stop video and **Start** for run video again. On the right is description **Setup** – after clil on it will be display request for login data.

Write username and password. Username is allways „**admin**" and password is „**1234**" (adjustable in settings). (To see the video is the name „*video*" and password „*1234*" - if required).

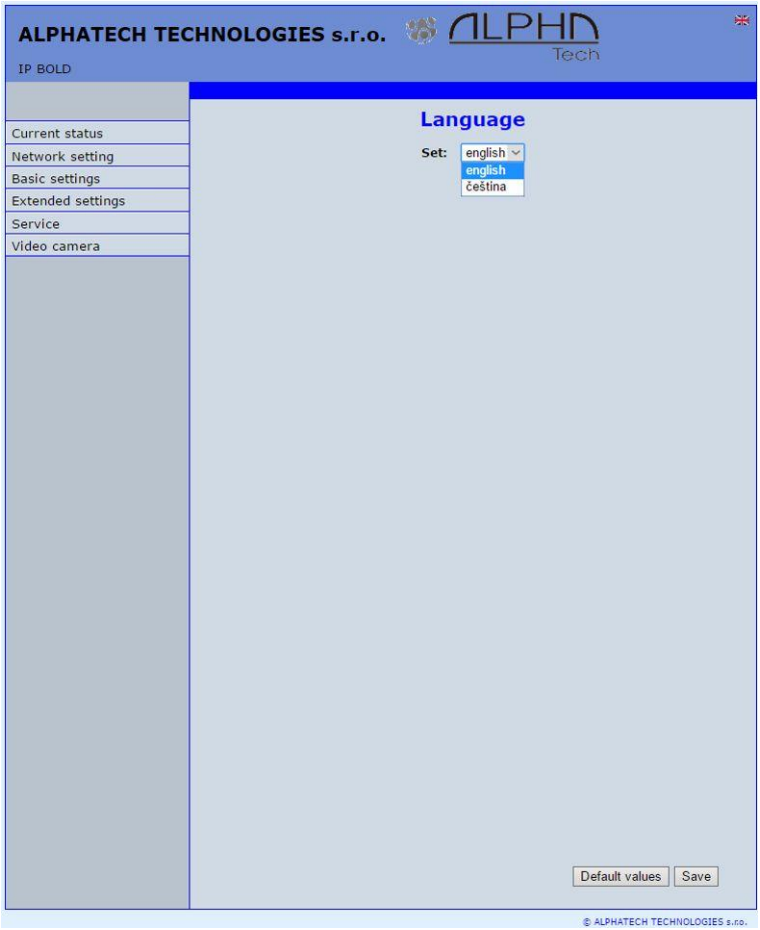
You enter now to first petting page of door entry IP VarioBell. On this page is display „Current status“. All necessary data about door entry status are here.

4.2 Current status



Current status display basic data about IP VarioBell door entry status. It displays Firmware version,door entry model, options connection (camera), SD card, MAC adresses, current time, network setting, door entry mode (P2P or SIP server), registration status and small calls statistic.

4.2.1 Language settings



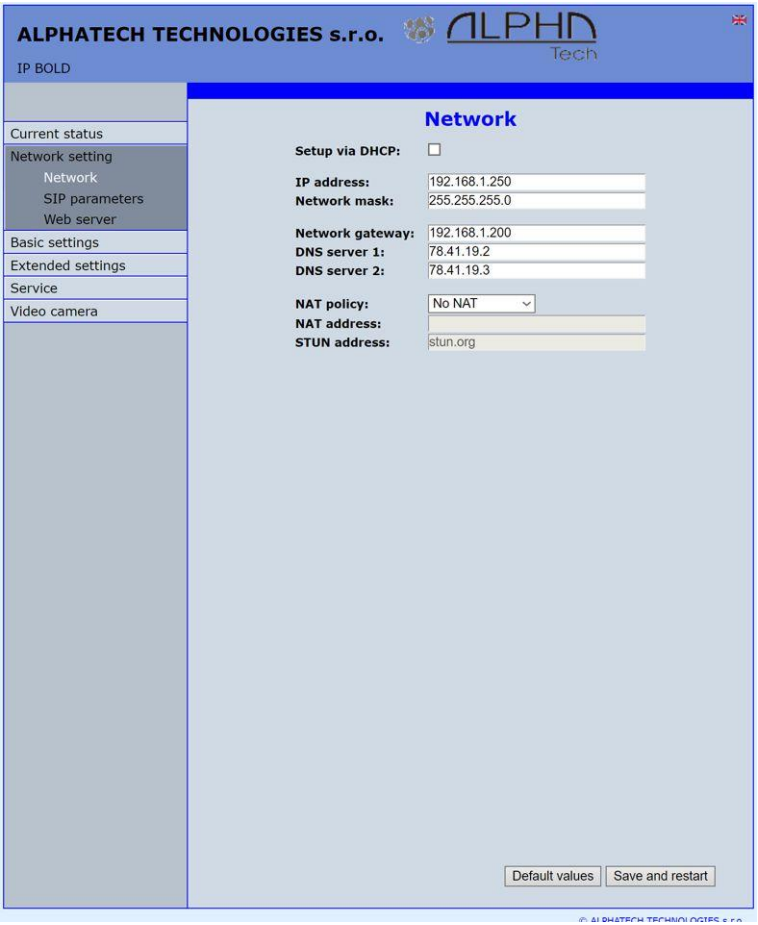
After language selection please don't forget click on „Save changes".
On the right top corner is display flag of current used language in whole WEB interface. After click on flag accessible language will be displayed. After language selection please don't forget click on „Save changes" otherwise language selection wont be performed.

4.3 IP network setting

4.3.1 IP Network setting

Network settings you find in menu „Network setting". You can select using of fix IP adress or dynamically assigned by using DHCP.

Configuration of fix IP adress:



After performing of required changes please don't forget click on „Save and restart".

Setup via DHCP - ON / OFF using DHCP assignment of IP adresses

IP adress, Network mask – IP adress setting, mask. In case of emergency please contact your network administrator

Network gateway – Router IP adress (Internet connection)

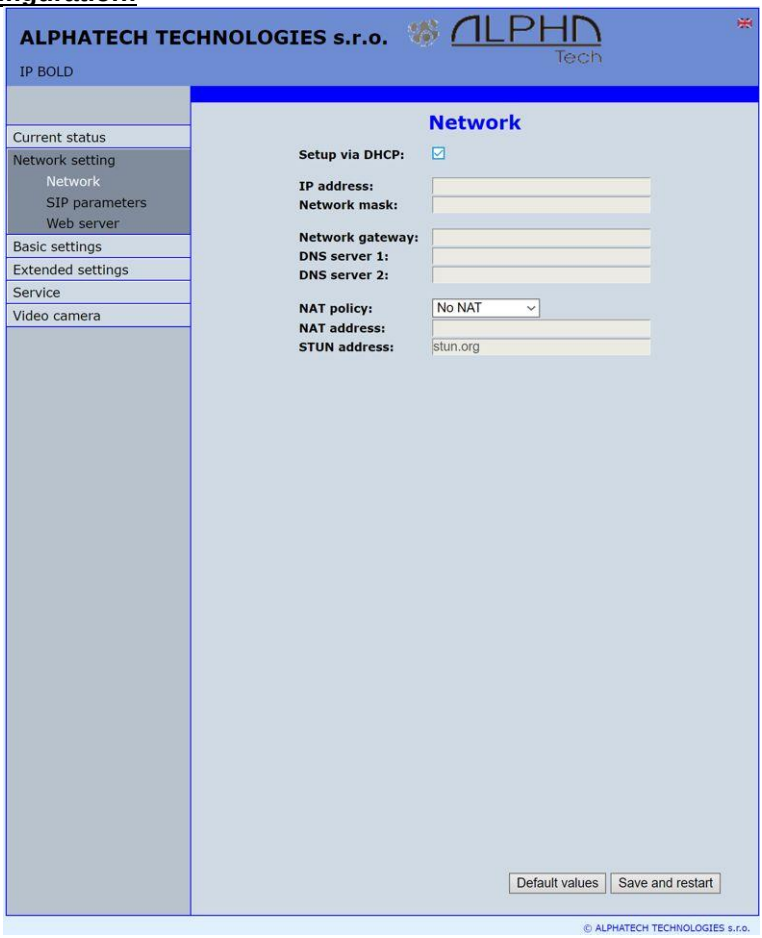
DNS server 1 and 2 – IP adresses of primary and secondary domain server

NAT policy - there is the choice of what kind of translate IP addresses used

NAT address - used for network traffic through the router (modifies transcription of the original or destination IP address)

STUN address - the IP address of the STUN server (see. page. 8)

DHCP configuration:



After performing of required changes please don't forget click on „Save and restart".

DHCP – by mark of this checkbox as same as saving and restart will be assigned to door entry IP VarioBell - IP adress by DHCP.

NAT policy - there is the choice of what kind of translate IP addresses used

NAT address - used for network traffic through the router (modifies transcription of the original or destination IP address)

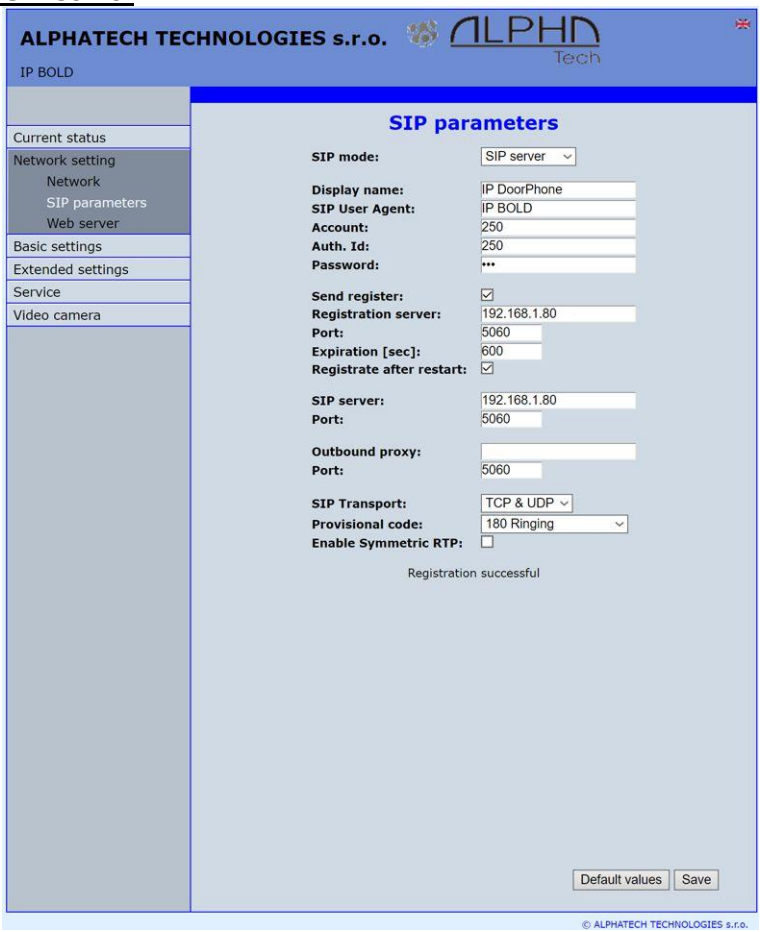
STUN address - the IP address of the STUN server (see. page. 8)

Important: *if you use DHCP setting then DHCP assign IP address to door entry automatically and network administrator will assure your current IP address to be able watch video in WEB browser. Therefore this dynamically assigned IP address might be changed due for example power failure we recommend use dooe entry IP VarioBell with fix IP adress.*

4.3.2 SIP setting

The door entry IP VarioBell might operates in 2 basic **SIP modes**. It is either **SIP server** – door entry registration is performed to SIP server and then you call to phone numbers assigned by SIP server or **Peer to Peer** (P2P) – door entry call exact IP adress and SIP server services can´t be used.

Mode SIP server



After performing of required changes please don't forget click on „Save".

Display name - name by which is device presented in network (for example will display as door entry name in programms UDV panel, UDVguard)

SIP User Agent – for easy inastallation is possible use the SIP user agent. The syntax of this string is not defined, but a common practise is „device name + version".

Account - unit name in SIP protocol (usually line number or name without diacritics)

Auth.ID - name for SIP server registration

Password - password for SIP server registration

Send register – when registration is necessary (mostly yes) then this parametr must be used

Registration server - IP adress or server name of registration server (in most systems and installations is enough to insert IP adress). Registration is performed on this server. When you dont mark send registration then dont fill *Registration server and IP adres sof SIP server write to Proxy server*.

Port - SIP port is usually 5060 or 5061

Expiration[sec] – expiration of SIP server registration (period of registration request repeated sending)

Registrate after restart – when you mark then allways during restart will be unregistrated

SIP server - IP adress or server name. Over this server connection is made. When is not filled then connection makes on *Registration server* (but you must mark *Send registration*)

Port - SIP port is usually 5060 or 5061

Outbound proxy - IP adress or proxy name where is determine where will be sends door entry requests. If outbound proxy is setup will be INVITE regest sends to outbound proxy adress. Outbound proxy is used due NAT. When is not used dont fill up.

Port - SIP port is usually 5060 or 5061

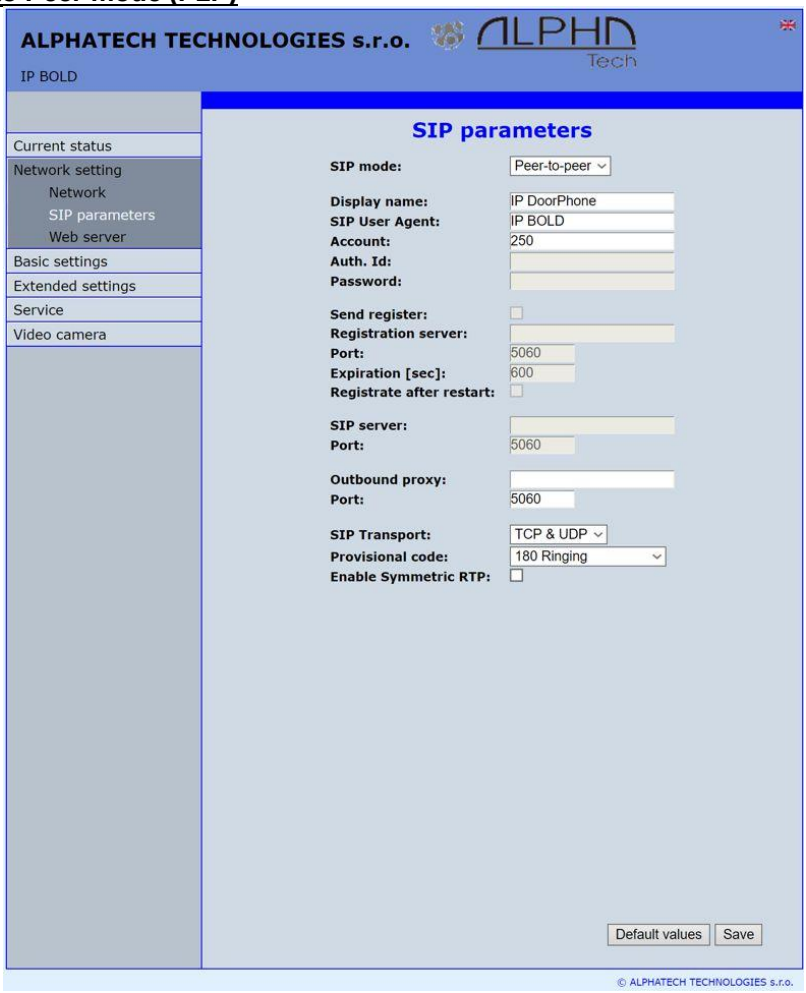
SIP Transport - TCP or UDP, or automatic selection

Provisional code – determine if during ringing will be sends SIP code „180 Ringing“ or „183 Session progress“

Enable symetric RTP - by mark is ON. It means that door entry will not sends by itself audio to RTP called party, but wait for called party to send RTP. After sends data to same adress:port from which message arrived. It is trick used for bridging NAT

Registration status display on page as visible on picture.

Peer to Peer mode (P2P)



After performing of changes please don't forget click on „Save changes".

Display name – name by which is device presented in network (for example will display as door entry name in programms UDV panel, UDVguard)

SIP User Agent – for easy inastallation is possible use the SIP user agent. The syntax of this string is not defined, but a common practise is „device name + version".

Account - unit name in SIP protocol (usually line number), it is recommended to keep filled.

Outbound proxy - IP adress or proxy name where is determine where will be sends door entry requests. If outbound proxy is setup will be

INVITE regest sends to outbound proxy adress. Outbound proxy is used due NAT. When is not used dont fill up.

Port - SIP port is usually 5060 or 5061

SIP Transport - TCP or UDP, or automatic selection

Provisional code - determine if during ringing will be sends SIP code „180 Ringing“ or „183 Session progress“

Enable symetric RTP - by mark is ON. It means that door entry will not sends by itself audio to RTP called party, but wait for called party to send RTP. After sends data to same adress:port from which message arrived. It is trick used for bridging NAT.

In active mode - P2P is possible to operate device, which require for their function registration at the SIP server. This option will use new SIP phones, which generally do not support P2P mode, as well as applications for iOS - Apple.

The principle of setting SIP phones and UDV guard, UDV Panel with IP VarioBell:

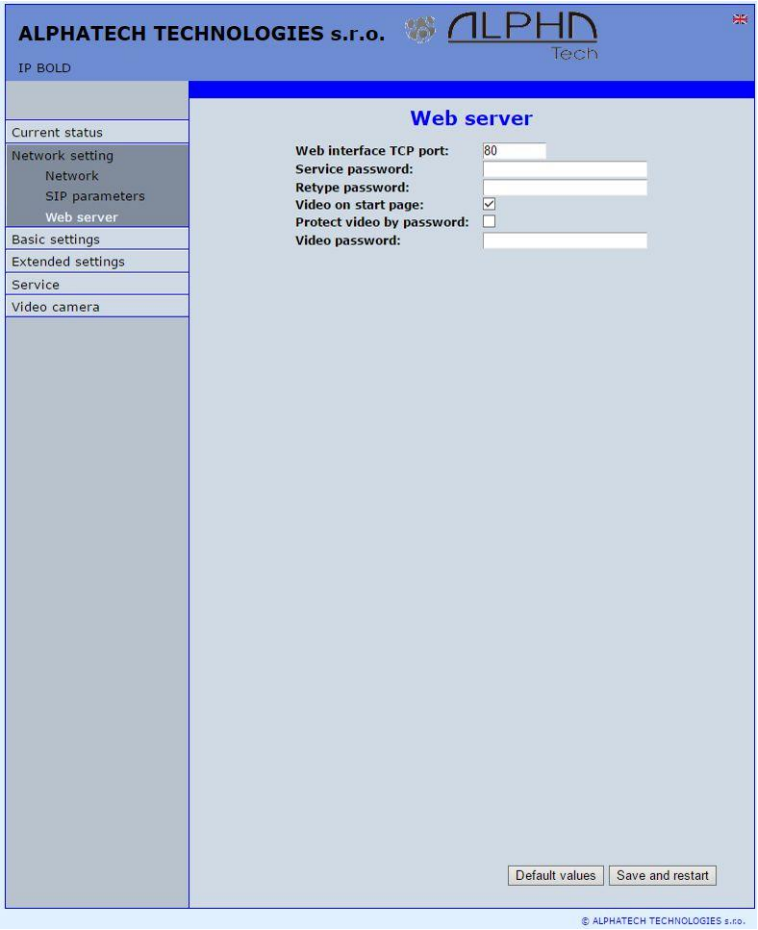
1. Mode of phone is SIP server registration is IP address IP VarioBell (registration or SIP server = IP address IP VarioBell)
2. Name and password is the line number (we choose a numbering plan so that each number occurred in the network only once, then for each device, fill in name and password to register with this number).

Example:

- IP address of IP VarioBell is 192.68.1.250 and the name (page SIP parameters) is **250**
- The IP address of SIP phone 1 is 192.168.1.200, fill in the registration here - SIP server = 192.168.1.250 and name = password = **230**
- The IP address of SIP phone 2 is 192.168.1.201, fill in the registration here - SIP server = 192.168.1.250 and name = password = **231**

Call to SIP Phone 1 is **230**, calls to SIP phone 2 is **231** and calls to IP VarioBell is **250**

4.3.3 WEB server



After performing of changes please don't forget click on „Save and restart".

WEB interface TCP port - posibility of chase usuall TCP port 80 to other (security reasons)

Service password / Retype password – inserting of new access password (instead default password **1234**) – length max.40 characters (name for access is **admin**)

Video on start page – Video ON/OFF on home page of WEB interface (mainly from security reasons. When video is OFF it is accessable after login with password only).

Protect video by password – further protection is secure access by password to http://ipaddress/video.jpeg (camera picture). **CAUTION! this option caused non working video on SNOM phones !**

Video password – inserting of new video access password (instead default password **1234**) – length max.40 characters (name for video access is **video**)

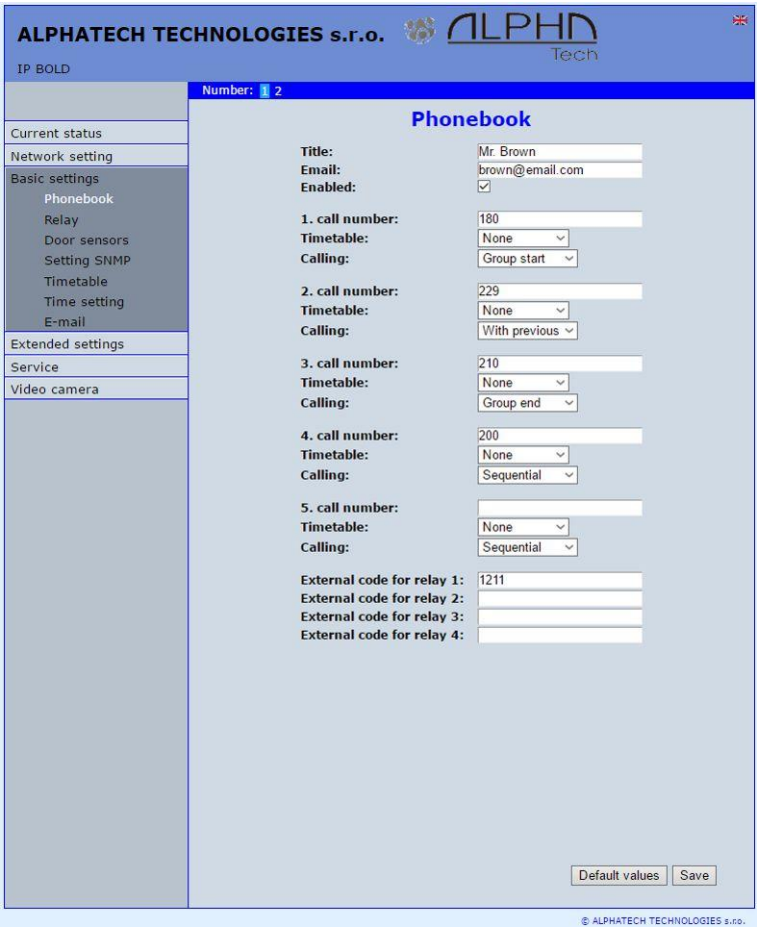
Enable telnet – available only for special customization.

posibility ON / OFF access from telnet (name: root, pass: 8765). **Use telnet is not recommended, in practice, this possibility has caused a lot of problems. Damage Doorphone IP VarioBell unprofessional intervention via Telnet warranty will be void Doorphone IP VarioBell**.

4.4 Basic setting

In this part are setup user and most often changed parametres.

4.4.1 Phone book



After performing of changes please don't forget click on „Save".

The phone book contents 999 subscribers. For first 99 subscribers agree subscriber number with button number. In this version of door entry – IP VarioBell is max = 87 button. Therefore first 87 subscribers are most important.

Position number in phone book is selected at top bar by click on appropriate numeral. It is possible also listed by 10 (</>) or go to exact position (all by selection in first – highlighted – row).

Every position of phone book allows insert up to 5 phone numbers with possibility to join some of them (or all) into group and call group of phone numbers simultaneously.

Title – This text has informative character only. In case of display using will be name shown in list selection.

Email - to this email will be sent Info about missed calls with picture or video in case of model (C) or with records (in case or recorder activation). Necessary is setup Emailu – via follow.

Enabled – Item of phone book (also function of appropriate button) is working hen is permitted only (marked). It has a sense for pensions, hotels etc….)

1. call number – is phone number with highest priority. It is call as first (when is used progressive dial mode). 1. Phone number will be dialled with compliance to selected time plan only.

Time table – when is not selected then 1 number is allways active. Usage of 1 phone number might be limited by time plan.

Calling - allows create groups – via follow.

2. call number – is phone number which is dial as second (when is used progressive dial mode). 2nd phone number will be dialled with compliance to selected time plan and when is filled only.

Time table – when is not selected then 2 number is allways active. Usage of 2nd phone number might be limited by time plan

Calling - allows create groups – via follow.

3. call number – is phone number which is dial as thirth (when is used progressive dial mode). 3th phone number will be dialled with compliance to selected time plan and when is filled only.

Time table – when is not selected then 3th number is allways active. Usage of 3th phone number might be limited by time plan

Calling - allows create groups – via follow.

4. call number – is phone number which is dial as fourth (when is used progressive dial mode). 4th phone number will be dialled with compliance to selected time plan and when is filled only.

Time table – when is not selected then 4th number is allways active. Usage of 4th phone number might be limited by time plan

Calling - allows create groups – via follow.

5. call number- is phone number which is dial as fifth (when is used progressive dial mode). 5th phone number will be dialled with compliance to selected time plan and when is filled only.

Time table – when is not selected then 5th number is allways active. Usage of 5th phone number might be limited by time plan

Calling - allows create groups – via follow.

External code for relay 1,2,3,4 – here insert priváte codes for code lock. The code lock might be completed from door entry buttons (mean

according buttons 1 – 2 in this model). Each subscriber has one cod efor every relay.

Calling – description

The group means that 2 or more phone numbers creates group and those Numbers are dialled simultaneously (all are ringing together). Who from dialled Subscribers pick up first can talk and ringing to other subscribers in group Will be ended.

Individualy – this phone number is dialled individualy. uet not in group with any other number.

Group start – first phone number in group call

In group with previous – phone number in group. uet not first and also not last.

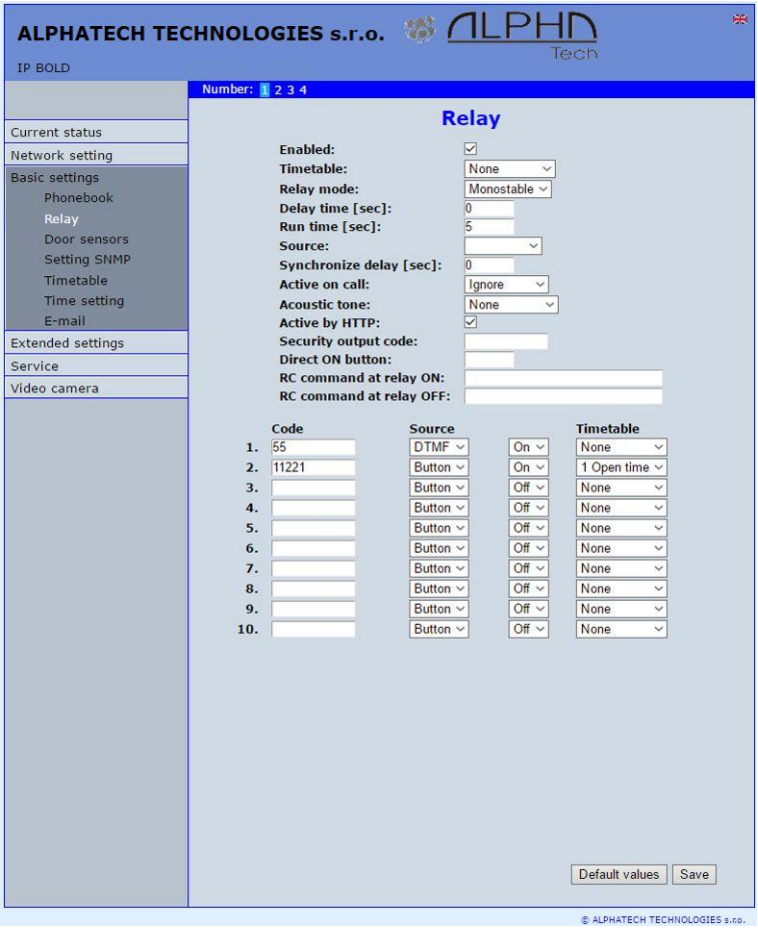
Group end – phone number is last from the group

By this setting you can create for every subscriber up 2 groups or groups with 5 numbers and make groups combination with individual phone numbers.

EXAMPLE: first phone number rings to operator – „Individualy“
Second phone number is „Group start“
Thirth and fourth phone number is „in group with previous“
Fifth phone number is „Group end“

– Those four phone numbers ringing in office together where are picked up by other subscribers when operator is busy. In offices phones start ringing after adjustable time.

4.4.2 Relays



After performing of changes please don't forget click on „Save".

In relays setting are accessible 4 relays. The relays 1 and 2 is output of relays contacts directly in IP VarioBell door entry. Next 2 relays (3 and 4) is possible use for remote relays (IP relays via follow) or as virtual relay usefull for synchronization to allows creation of more difficult functions of relays**. The relay selection is perform by click to relay number in top highlighted row** – similiary as in phone book.

Enabled – relay function might be eliminated. uet his will be eliminated synchronization signal for other relays. Meaning is for example when you want temporarily prevent certain door opening. Then instead of all codes cancellation and their repeated programming simply prohibit this relay. After time out you can easily return relay with all codes to

original function. When such status repeats regularly (for example school) you can use time plan.

Time table – defines time period when relay is working and hen not. For example is shop operation time , school, etc..

Relay mode -

monostable – by code is closed and after preprogrammed timeout is open. Using for electrical lock switching, sliding gates control, button press signalling etc... (for control codes setting you must insert „ON" (via follow)

bistable – by code is closed and stay closed till moment of open by other code. For this purpose is beside control codes posibility select „ON" for closing and „OFF" for open. (via follow)

Delay time – is time, between closing code evaluation and relay closing. It has no influence for open code which is performed immediately. Closing time is calculated from real relay closing. Using is for example: *progressive door opening, we setup same closing code for both relays, by this delay is monitored walking time from first to second doors.* This feature is adjustable by synchronization as well. By synchronization delay are available individual codes for each doors control.

Run time – relay closing time in monostable mode (time of electrical lock opening)

Source -

Synchronize from time table - it is selected time plan for relay and 2 options are available:

Monostable, then allways when setup time period in time plan is suitable and time plan is active is perform closing for preprogrammed closing time.

Bistable, then allways when setup time period in time plan is suitable and time plan is active the relay is closed and out of those conditions is open.

Synchronize with relay 1 – 4 – relay closing starts closing of the same or other relay. Example for usage is sliding gate control, where by partly opening you can create passage – door substitution. For this mode relay must close for 1 sec in 2 times in sequence. Where period between closing is created passage.(for example 6sec). *The setting make that for relay 1 select monostable mode with time closing 1 sec, synchronization with relay 1 and synchronization delay 7 sec*. In case you need setup situation that for one code (55) relay 1 close 2 pulses in sequence – passage creation and by second code (56) gate will be closed then use not connected relay 4 for synchronization. *Setting of relay 1 is monostable, closing time 1 sec, synchronization with relay 4 and synchronization delay 7 sec. Codes for relay 1 closing are 55 and 56. The relay 4 we setup as monostable, closing time 1 sec, closing code 55.*

By synchronization you can create different closing combination.

Synchronize delay – time between synchronization start and its evaluation. Usage for example in more relays closing combination for one code

Active on call – options are

none (calling has no influence for relay status)

incoming call – relay closed during incoming call. The monostable for preprogrammed time. The bistable permanently for all call duration.

outgoing call – relay closed during outgoing call. The monostable for preprogrammed time. The bistable permanently for all call duration.

Both call – relay closed during every call. The monostable for preprogrammed time. The bistable permanently for all call duration.

Acoustic tone – In case of need you can simulate relay closing by sound signal. This feature is usefull mainly in monostable mode in case of PoE feeding of low consumption electrical lock by DC power supply. This sound simulates typical buzzing of electrical lock. Further option is record voice message to SD card for blind people with information about electrical lock opening.

This option has yet another hidden meaning, the LED on the front panel when you turn the acoustic signal indicates the switch is activated lights red + green.

Activate by protocol HTTP – relay status is possible change by sending HTTP request (GET request) to IP adress of door entry. To get working this feature you must permit by parametr relay control by HTTP. Request for door entry must be in following format (you can test by variol web browser):

command relay switch:

IPaddress / relay_control? R = on where r = number of relays 1-4

E.g. http://192.168.1.250/relay_control?1=on - switches on relay 1 (doorphone to the default IP address)

command to releasing relay:

IPaddress / relay_control? R = off where r = number of relays 1-4

E.g. http://192.168.1.250/relay_control?1=off - switches off relay 1 (doorphone to the default IP address). Releasing the relay is important in the bistable switch mode.

Security output code – relay output is close/open in default. This static status is dangerous in case of unauthorised enter for example by door entry demaged and short circuit wires of power supply and electrical lock. Defence is using module COSW which you connect to electrical lock wires – closest to electrical lock. For relay closing is sends in such connection pulses set and when setup code at COSW match with code of this parametr relay is closed.

Caution – ***do not fill code when electrical lock without COSW is connected. It can demage relay in door entry IP VarioBell!***

Direct ON button – when you fill up button number then this number will work as **departure button** only. Eventually might be used relay output for control of mechanical bell. During button press is relay activated in monostable mode for closing time. If in the phonebook filled for this button telephone number then be combined with relay closing with calling telephone number.

RC command at relay ON – Enable setup command sends to external device (for example WEB relay) during relay closing. Command is sending by protokol HTTP (GET request). The command must be in format http://ip_address/command. Specific command, refer to the manufacturer's documentation WEB relay.

RC command at relay OFF- Enable setup command sends to external device (for example WEB relay) during relay opening. Command is sending by protocol HTTP (GET request). The command must be in format http://ip_address/command. Specific command, refer to the manufacturer's documentation WEB relay.

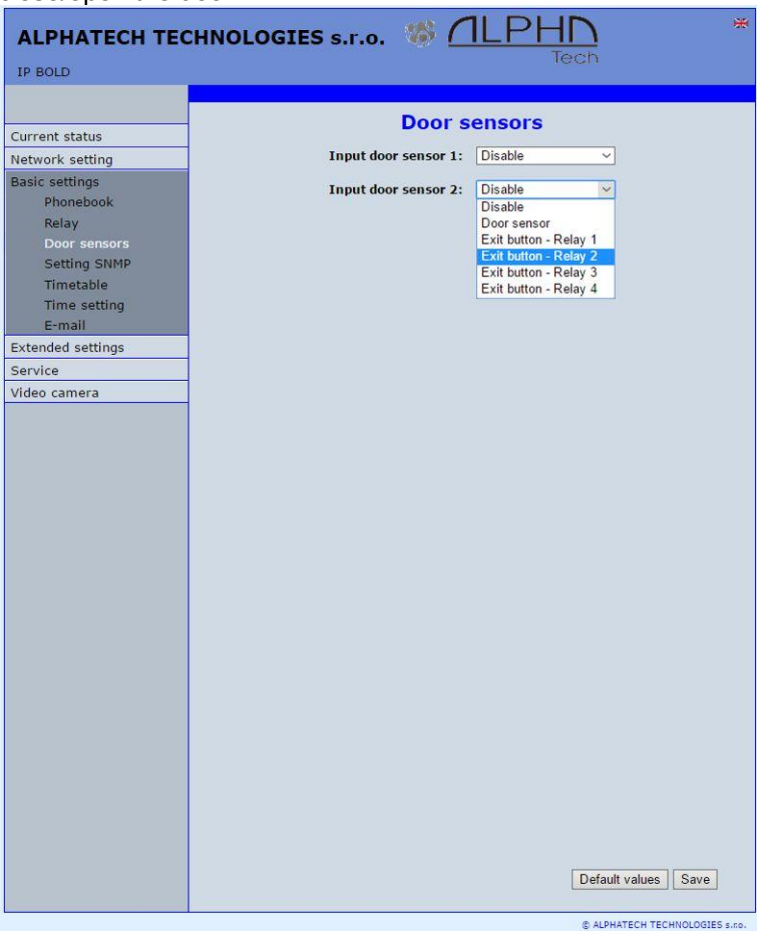
Codes for relay control – here is 10 basic central codes for relay. Moreover every subscriber in phone book has his own priváte cod efor relay control (code keylock from buttons). Those 10 codes might be assigned as codes from buttons (code keylock) or by phone (DTMF). Further is possible assign feature relay closing/opening (ON/OFF). The Code validity is discriminated by time according selected time plan.

Examples:

1. Closing switch 1 from the phone (DTMF) – on the picture is filled with code 55 without any time limit, closing the switch is activated by dialing 55 from phone
2. Closing switch 1 from buttons – on the picture is filled with code 11221 with time limitation (open time), closing the switch is activated by pressing a sequence of buttons 11221 on IP VarioBell

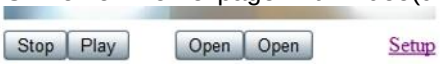
4.4.3 Door sensors

Door sensors are special functions of door entry IP VarioBell which is optional. It is HW option which is different according button number of each model – inputs for door sensors. There is created information in the system about close/open the door.



After performing of changes please don't forget click on „Save".

Input door sensor 1 / 2 *Door sensor or disable* – by permission is activated transmission of Info about open / close the door. This Info is display ether on this page – **Now is** – or on home page with video(under video frame will be display frames with this Info. Further is transmitted to programms UDVguard and UDV panel and as last is possible use it in SNMP.



Input door sensor 1 / 2 *Exit button – relay 1-4* – because the use of door sensors not found so wide usage, so these can be used as two inputs to the function Exit button. When the input connections (short) so activates the corresponding relay (switch monostabil) .

4.4.4 Setting SNMP

Remote management – SNMP is internet protokol designed for network management. It allows progressive data collection for network management purposes and its following evaluation.

After performing of changes please don't forget click on „Save".

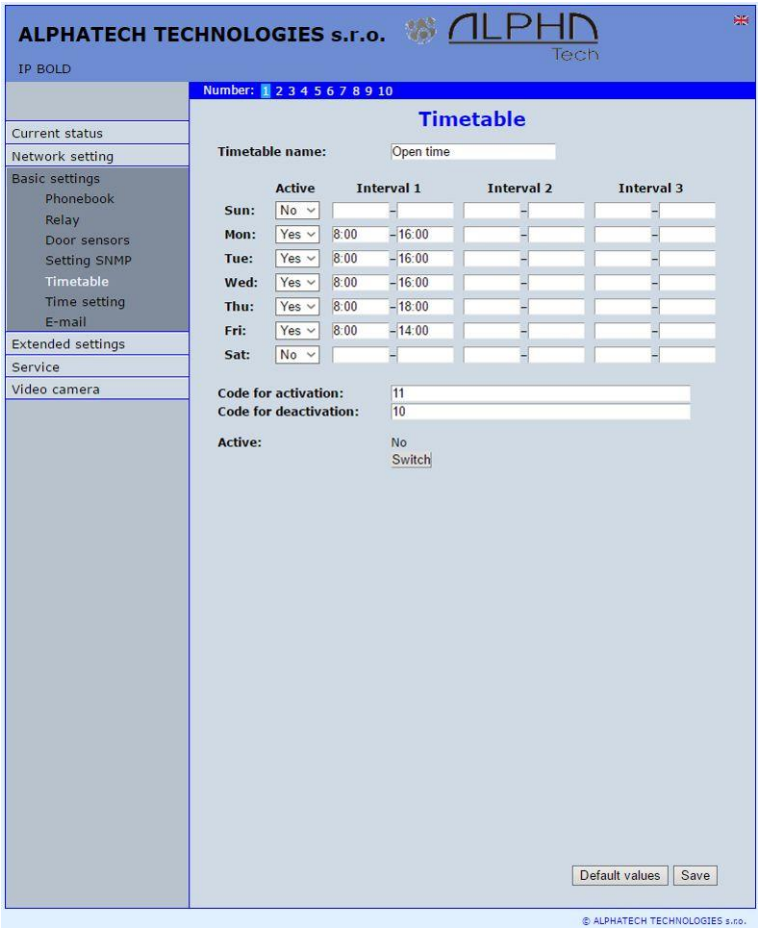
Enable SNMP – by mark you activate remote management (SNMP)

Community – here is necessary select exact user of SNMP

Admin adress – setup IP adress or domain name of server where are sent information according defined setting

Variables in MIB tree – is designed for identification of none sense numeral chain OID OID is numeral identificator which definitely identify every value in SNMP communication. OID is created by number sequence separand by dot. Every dot represent exact level of tree structure into which are OID maped. The numeral identification in range of each undertree is not Unixe that is why OID is sent allways as whole unit.

4.4.5 Time profiles



After performing of changes please don't forget click on „Save".

In time profiles setting is available 10 profiles. **Profile selection is perform by click in top highlighted row** – similiary as in phone book.

Timetable name – for easy orientation you can named every profile.

Period setting table – profile is active when current time match with setup periods. Every day might have up to 3 active periods. Further is

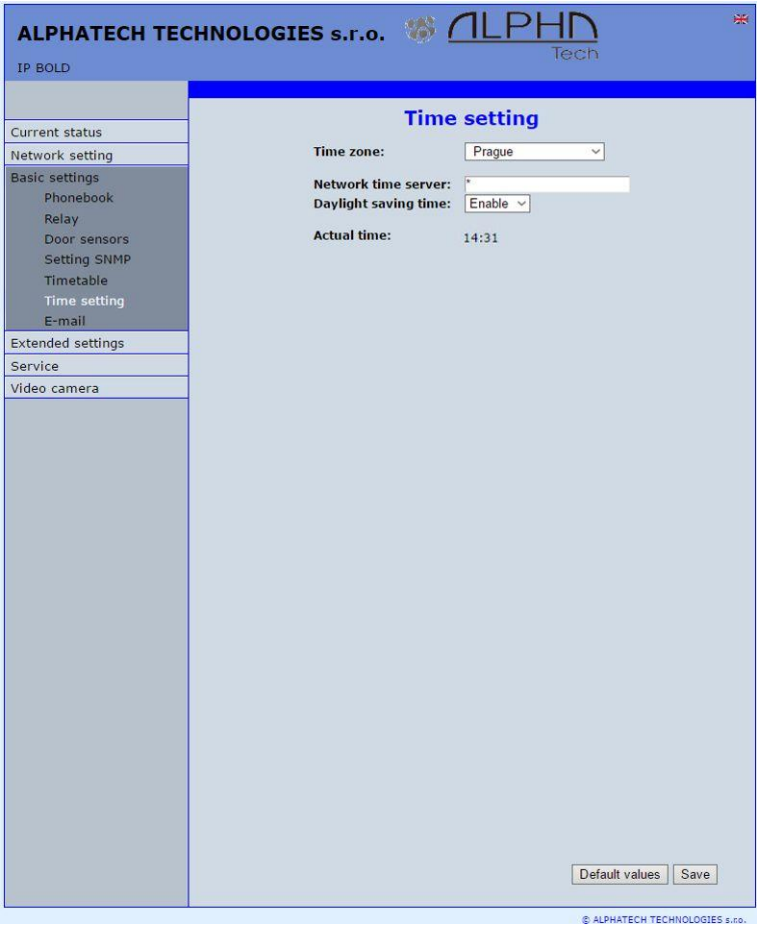
possible deactivate whole day (first item on the row select „Active“ – Yes /No) . In example on the picture it is Saturday or whole day setup on active – in example i tis sunday. To use correctly this feature is necessary to setup correct time in the unit (via Date and time setting)

Code for activation / deactivation– immediate switching status profile by using DTMF. If you switch the time profile, then change it takes to meet the closest in time profile changes (according to the times in the table) or switch to another state using DTMF.

Active – display current profile status

Switch – by click you change profile status

4.4.6 Date and time setting



After performing of changes please don't forget click on „Save“.

Time zone – selection of installation time zone

Network time server – IP adress or domain name of NTP server. When you dont know then by inserted * will IP VarioBell find NTP server automatically according own selection. Condition is setup in network setting start gate and DNS.

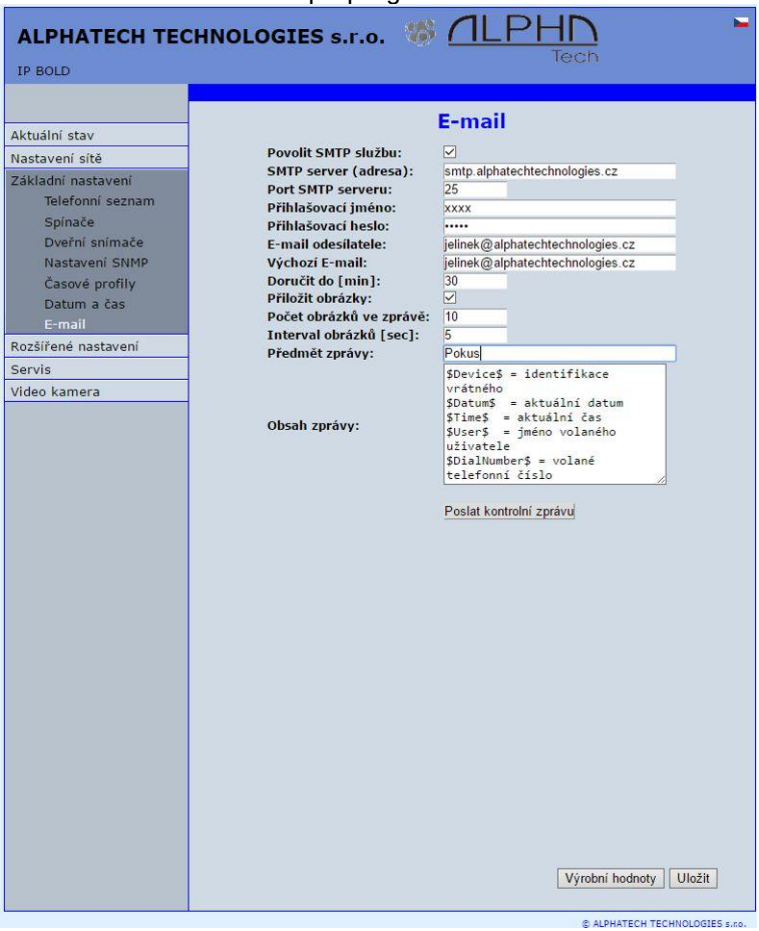
Daylight saving time – permission to switch daylight time

Actual time– for control is display present time in IP VarioBell

4.4.7 E-mail

When you want inform subscriber about missed calls from door entry you can setup IP VarioBell to sent out email after every missed call. You can setup own subject and text of email. When you have door entry with camera you can automatically add to email one or more pictures from camera. (Pictures are taken during ringing)

Door entry sends emails to all subscribers who have in phone book preprogrammed valid email adress. When parametr E-mail in phone book is not filled then emails are sent to preprogrammed default email adress.



After performing of changes please don't forget click on „Save".

Enable – it activates email sending
SMTP server (adress) - SMTP server adress where emails will be sent

SMTP port – adjust in case of none standard SMTP server setting only. SMTP port is setup usually on value 25, but better is use port 587.

SMTP, there are three systems:

- Port 25 not allow encrypted - it is marked as obsolete, insufficient safety
- Port 465, not a domain hosting - is labeled as not recommended at
- Port **587**, has no maladies previous two, is currently the only **recommended variant**

SMTP account – when SMTP server requires authorization then must be in this field mentioned name for registration to server. In opposite case leave field empty.

SMTP password – password for registration to SMTP server.

Message from– sender e-mail mentioned in sent email.

Default message to – door entry send emails to adress mentioned in phone book at appropriate subscriber. When you leave this field empty then email is sent to default email which you setup in this field. When receiver is not mentioned in phone book as same as default email field the email is not sent. This e-mail is designed also for function control – ***Send control message*** – when you want verify correct functionality of emails sending then this control message is sent to this email.

Send timeout – Setup max time for which door entry try to deliver email to inaccessible SMTP server

Attach pictures – enable send attachment with one or more Picture taken during ringing.

Pictures count – setup Pictures number which will be attached to email.

Picture interval – setup time between each pictures

Message subject – setup subject of sending email message

Message body – enable correct contents of sending message. You can insert to text special alternative symbols for user name, date and time for door entry identification. Those alternative symbols will be substitute by actual value before email sending. Via follow table of alternative symbols:

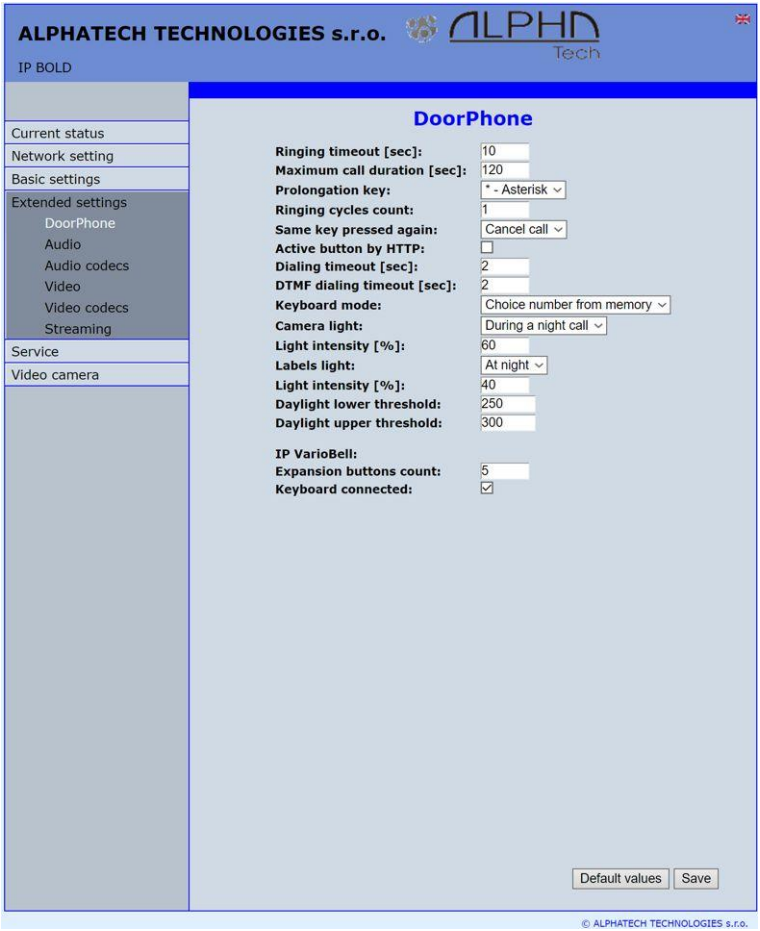
$Device$ = door entry identification
$Date$ = current date
$Time$ = current time
$User$ = name of dialled subscriber
$DialNumber$ = dialled phone number

Send test message – when you want verify correct functionality of email sending then control message will be sent to default email

4.5 Extended setting

This part is designed for system setting which are done once during installation or when are problems with device kompatibility.

4.5.1 DoorPhone



After performing of changes please don't forget click on „Save".

Ringing timeout – time for which is ringing. When is setup more numbers as same as progressive ringing then after this time ringing is ended on first phone number (IP adress in P2P) and starts ringing on second. It is time until which subscriber must pick up. When is not next number to call then email is sent either to email adress mentioned in phone book or to default email (E-mail setting).Setting range is 5 to 300sec (6min.) caution: it might happen that ringing time will not be limited but it is limited by time parametres of SIP protocol and it is

usually 2-5min (according SIP device setting). You can record message to SD card during this time and simultaneously send email.

Maximum call duration – when call is picked up timer for call duration limit is activated. When you insert empty, then there is no limit. The 10sec before call end you hear tone after which you can dial character for call prolongation and by this prolong the call about same time period.

Prolongation key – options are * or # and usage is descriped in „Maximal call duration"

Ringing cycles count– this option enable repeating of call (or progressive call) . In phone book is for example filled first and second phone number and not create group. When come condition for first number: - ringing time is out
- phone number is busy
- subscriber is not reachable / registrated in network

Then second number is dialled. When the same conditions come true and ringing cycles are setup 2 the whole cycle is repeated one more time.

Same key pressed again – when you press again the same button then you setup door entry behaviour. Options are:
- call is hang up
- call is repeated
- nothing happen

Active button by HTTP – if checked, so is possible use http request for remote activation button (like as press the button. This feature is for easy check the installation IP VarioBell.

Example:

http:// IPaddress /button_control?btn=1 - remote activate button 1

http:// IPaddress /button_control?btn=27 - remote activate button 27

Dialling timeout – this time concern buttons (keypad) and it is deciding for correct code inserting. When space between button press is longer than this time the cod eis not correctly evaluated . Situation:
- code keylock provides correct code evaluation
- number dial from keypad –dial end resolution

This time simultaneously prolong dial time at buttons which are initial numbers of codes.

DTMF dialling timeout – this time concerns incoming calls from telephones and it is deciding for correct code inserting . The principle is the same as previous parametr but it concerns codes from telefone.

Keyboard mode – <u>models TK only</u> – ***memory number dial*** means that you press 1-3 digit code on keypad which determined position in phone book (1-999). The door entry process the call same way as you pressed button on door entry (1-999). ***Direct phone numbers dial*** means that you dial numbers by keypad as on ordinary phone.

When you have in numbers dial space longer than **maximal number inserting time** then door entry calls. When you want in mode P2P call to IP adress then „.” in IP adress is substitute by (*) **.**

Camera light – wideangle camera has posibility of extra lighting when light conditions are not acceptable. The lighting provils by white LEDs (unfortunately infra LED cant be used but advantage is fully colour picture). The door entry has dark sensor and you have following options of lighting:

- OFF, LEDs will never light
- during conversation, LEDs are allways lighting during call independently on surrounding light conditions
- in the night, LEDs are lighting according surrounding light conditions independently on call
- during night call, Led svítí pouze při hovoru a podle okolního osvětlení

Light intensity – here you setup LEDs light intensity

Labels light – name card might be backlighted by 3 ways:

- OFF, name cards will never be back lighted
- in the night , backlighting depends on surrounding light
- name card is permanently back lighted

Light intensity - here you setup backlight intensity

Daylight lower treshold – settings sensitivity ambient light sensor, the lower limit of the window comparator (range 1-1021)

Daylight upper treshold - setting sensitivity ambient light sensor, the upper limit of window comparator (range 1-1021)

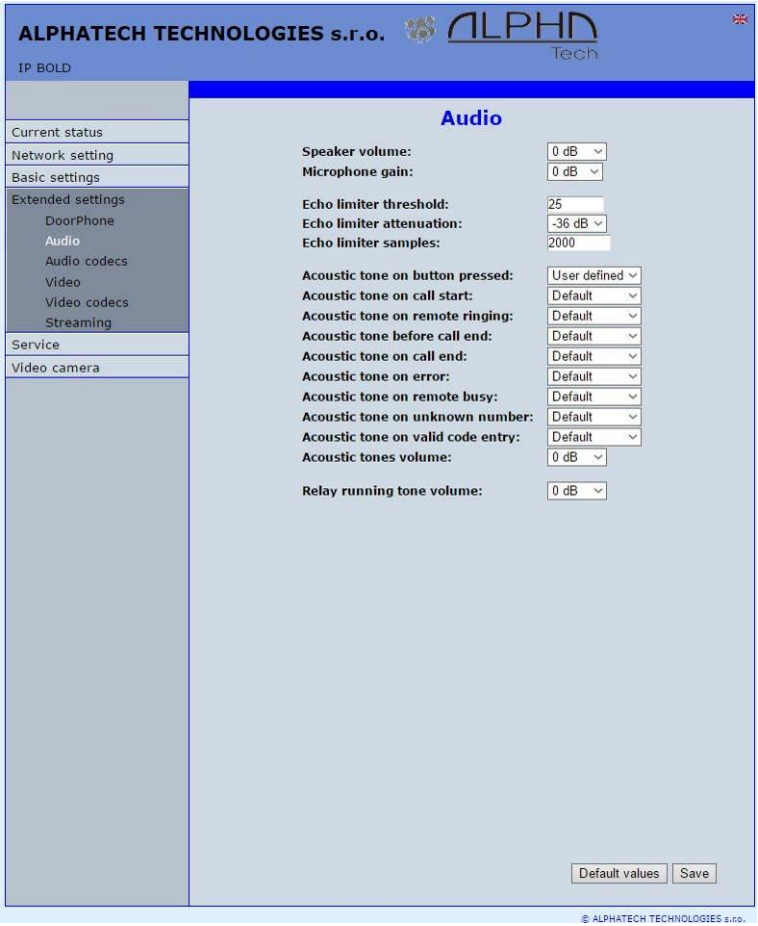
ATTENTION The lower limit must always be less than the upper limit, as the difference between the two values is the hysteresis (recommended to maintain approximately 50)

IP VarioBell

Počet rozšiřujících tlačítek – zde se zadává počet tlačítek rozšiřujících modulů. Toto číslo je součet tlačítek připojených na základní modul. Základní modul má vždy 2 tlačítka 1 a 2 (i když přední panel má např. pouze jedno tlačítko). První rozšiřující modul začíná vždy tlačítkem 3. Pokud připojíte např. dva moduly tlačítek po 10 tlačítkách, tak do tohoto pole zadáte 20. V telefonním seznamu se vytvoří 22 položek, protože jsou 2 tlačítka na základním modulu + 20 = 22.

Klávesnice připojena – zde je nutno zaškrtnout v případě připojení klávesnice. Nezáleží na pořadí modulu. Po zaškrtnutí se v telefonním seznamu vytvoří maximum (999) položek pro využití adresování položek telefonního seznamu z klávesnice.

4.5.2 Audio setting



After performing of changes please don't forget click on „Save".

Speaker volume + Microphone gain – amplification setting

ECHO limiter – it is designed for Echo cancellation which is created by distortion of loud signal.During standard door entry call is working automatic adaptive echo canceller which cancel the echo after cca 3 seconds of talk and call is full duplex. The setting is : High intensity signals coming from phone to speaker of door entry are distorted and automatic echo canceller cant process them. This level of **treshold** you setup (in %). How much should be reduced signal returning through microphone input is adjusted by **attenuation**. Delay of returning signal is adjustable by **samples** amount.

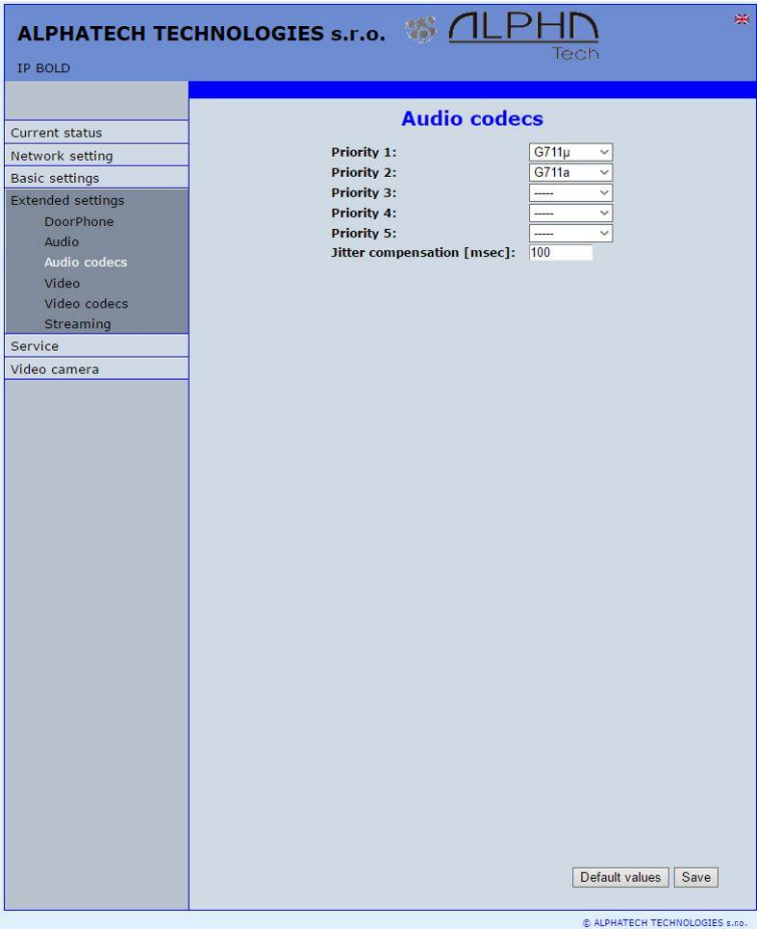
Tone – here you select acoustical signalling of different door entry status.

Options are: - None, this status will not be signalling

- default, simple signalling in default setting
- user, this is recorded signalling by user (SD card) -via. Service

Volume – loudness signalling adjustment

4.5.3 Audio codecs

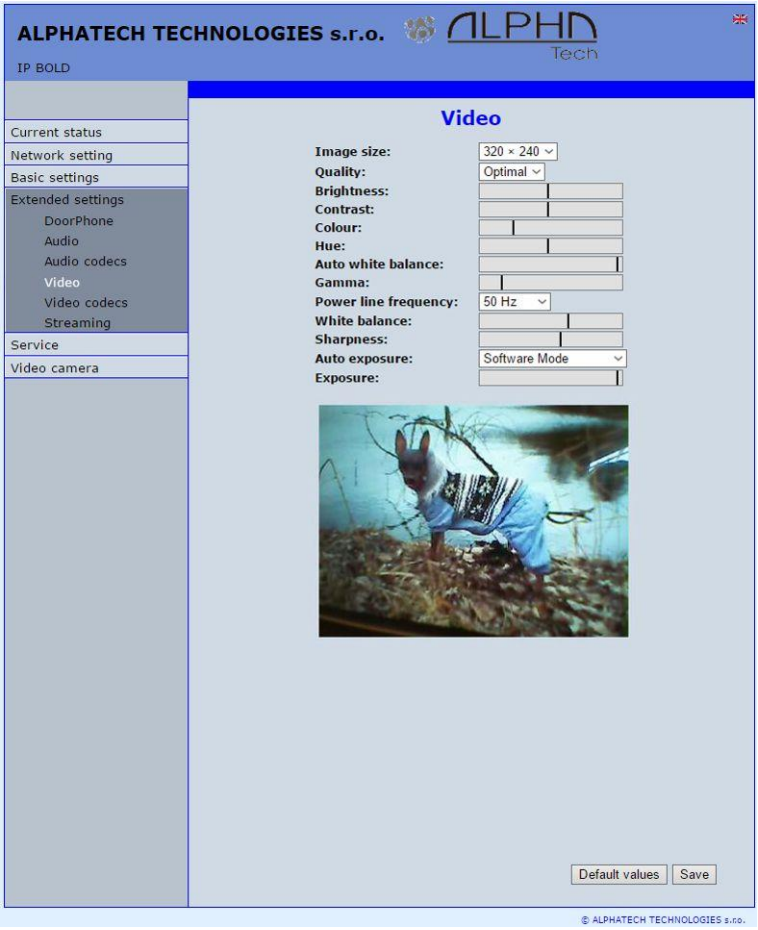


After performing of changes please don't forget click on „Save".

Priority – setting of codecs priority for usage. Some audio codecs requires payable license (for example G729) – codec permission you perform in Servis – license management.

Jitter compensation - jitter means fluctuation of packet delay during network running

4.5.4 Video setting



After performing of changes please don't forget click on „Save".

Image size– image size selection. Stream H.263 knows just CIF resolution (352x288) so bigger image is cut and smaller image is framed

Images per second – this setting concern mainly image transmission to WEB browser. For H.263(4) is flow control flexibly according processor and network workload and it is in range 5-15 pictures/sec. Maximal flow is possible rejected by choice Low – Optimal – Full.

Further setting is standard image parametres petting and reset is immediatelly visible in Windows screen.

Auto exposure - a choice between three balancing exposure image.

1. Manual mode – you set the exposure manually using the slider Exposure at the bottom

2. Aperture priority mode – automatic exposure is adjusted by the camera module
3. Software mode – exposure calculates and sets the software in IP VarioBell

 Before adjusting image parameters, it is recommended to use the first Default values..

4.5.5 Video watching (PopUp programm)

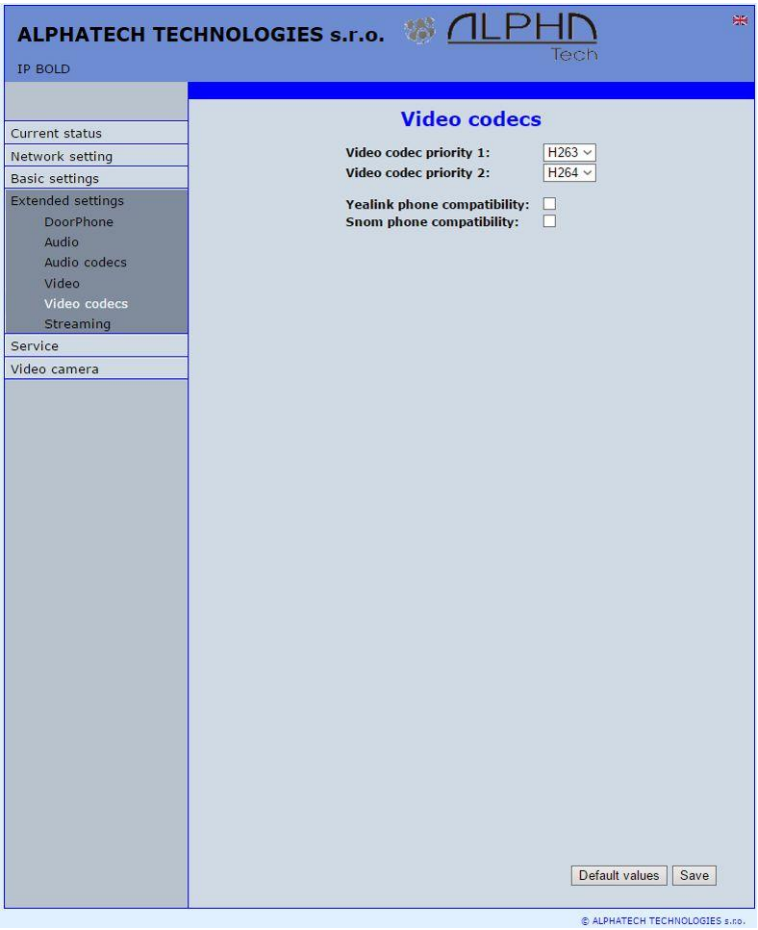
The door entry video records by USB WEB camera. The camera image sends either like JPEG pictures set to WEB browser (first page on door entry IP adress) or door entry sends stream video in coding H.263 and H.264. This streaming video you can watch for example on IP phone with LCD display.

Further very popular video watching is using PopUp programm iBell for Windows. You can ask us to send you a free copy of this Windows SW app.

For Android operating system you can download programm UDVguard on Google Play for free.

For iOS (Apple) operating system you can download programm UDVguard on AppleStore for free.

4.5.6 Video codecs



After changes performing please don't forget click on „Save".

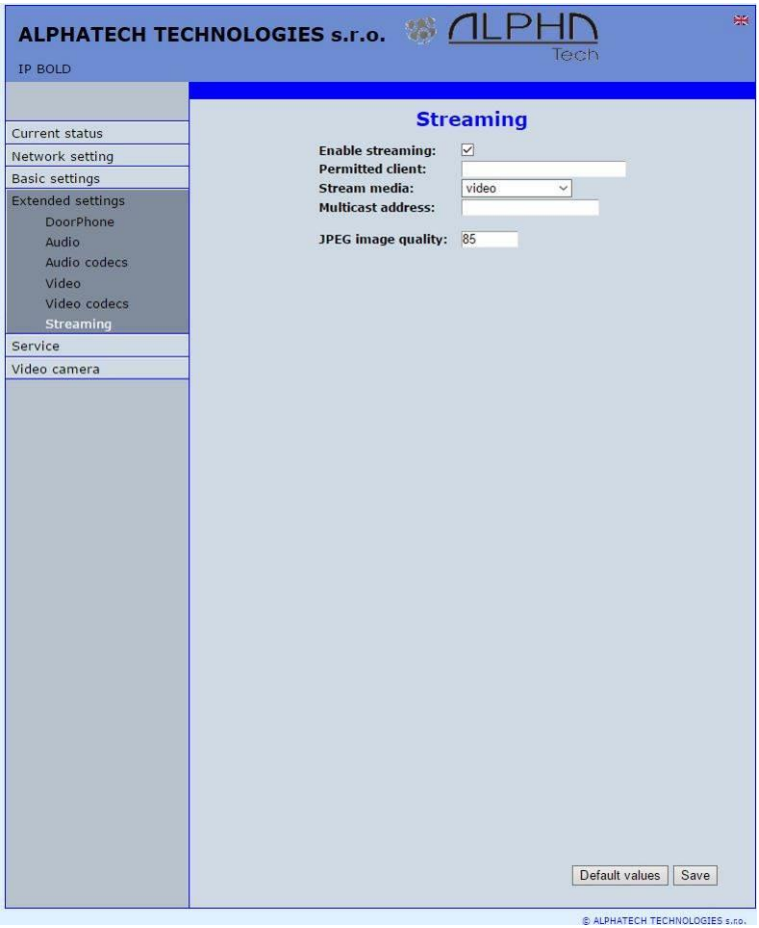
Priority – setting of codecs priority for usage .

Compatibility – Due some of VOIP phones producers specialities you have to use in certain cases extra setting:

Yealink – phonesYealink

SNOM – it is script sending for showing JPEG video. It is unique for SNOM phones

4.5.7 Streaming



After changes performing please don't forget click on „Save".

Enable streaming – permitted / prohibited to provide video (H.263 and H264) by door entry IP VarioBell (server) protocol RTSP on port 554. To receive such video you need some standard stream video players (IP TV or for example Grandstream, MPlayer, VLC etc…). This video running permanently. It is not depending on calls.

Permitted client – when is not filled up then video might be watch by anybody. When is filled then video is limited just for this IP adress

Stream media – selection of what will be transmitted from RTSP server:

- video
- audio
- video and audio (now not implemented, we prepare)

Multicast adress – by inserting IP adress you permit sending RTP packets to selected multicasting adress.
JPEG image quality – you insert percentage of video coding quality

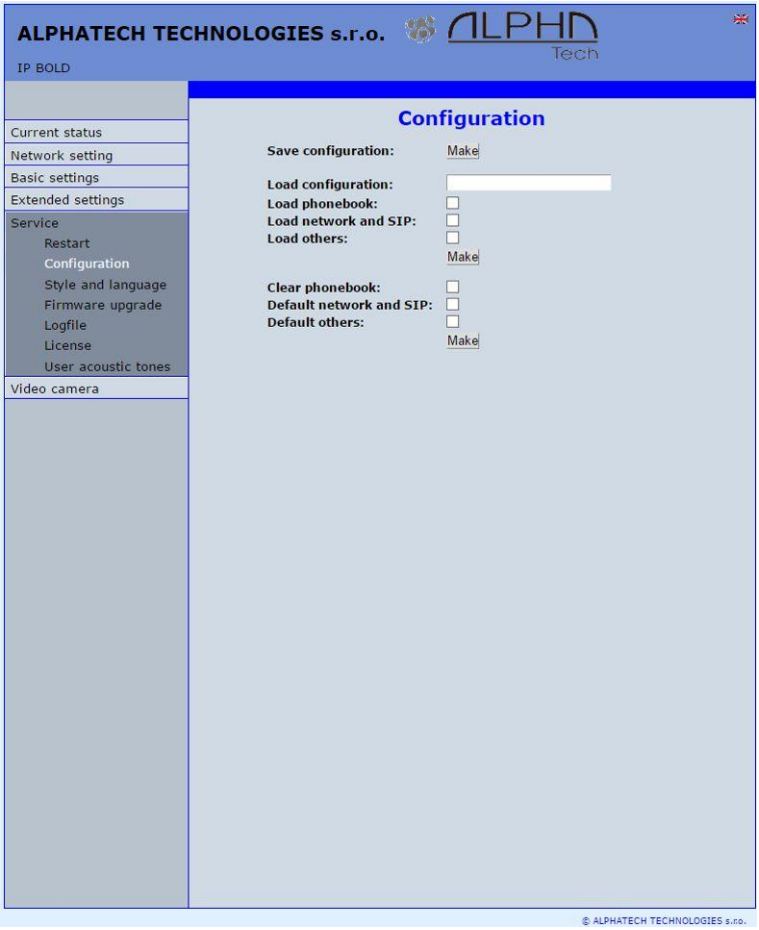
4.6 Service

This part contents service functions.

4.6.1 Restart

By click on „Restart“ button you make door entry reset.

4.6.2 Configuration



The door entry IP VarioBell allows saving of current setting to PC or other repository. From this saved file you can later restore this setting in a few levels – for example phone book only. It helps for example during installation of door entry in more entries to the building.

Save configuration – after click to „Make" button will be offered where you can save the file

Load configuration – by click to empty button will be offered file selection. Further is necessary select if phone book, network setting, SIP and other parametres have to be loaded. By click to „Make" button is loaded door entry petting from the file.

Default (factory) setting – is selectable in more levels:

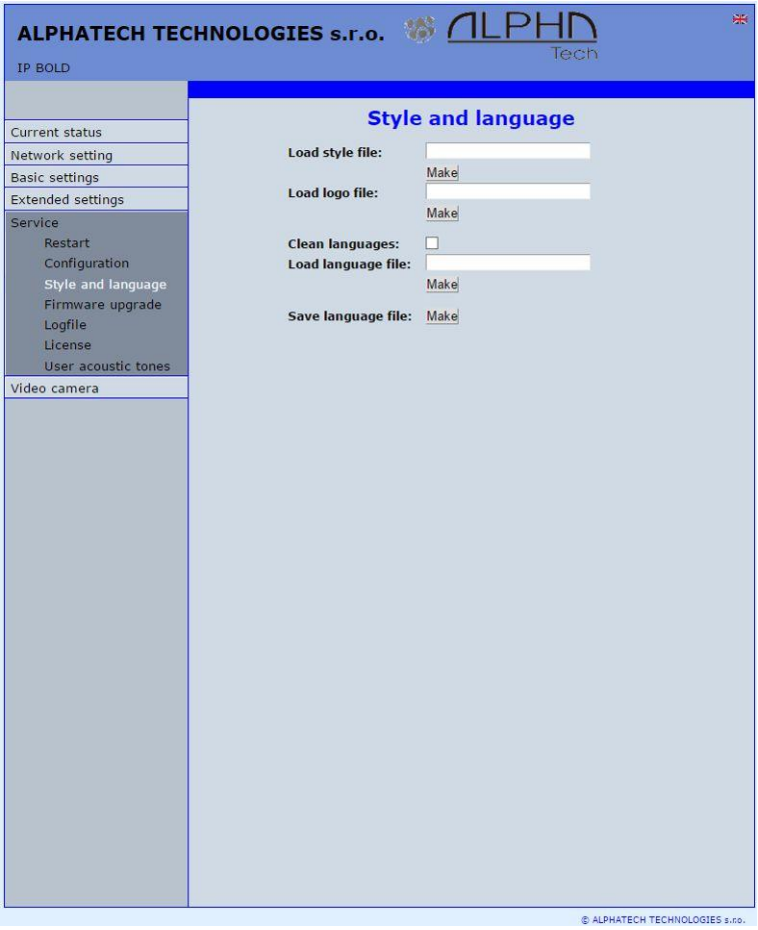
Clear phone book – erase complete phone book into default (all 999 possible items)

Default network and SIP – make default setting of network (IP adress 192.168.1.250) and erase SIP setting

Default Others – all remains parametres put to factory setting

By click to „Make" will be done required setting/erasing door entry parametres.

4.6.3 Language and style



Load Style file – by click to empty button select the file and by click to „Make" is style file (symbols and colours setting) loaded /*.html/.

File with customization use from firmware V3.4.2 on this place for change the style (design) of WEB pages in doorphone IP VarioBell /*.custom/.

Load logo file – by click to empty field select the file and by click to „Make" is logo file. Logo file is standard picture /JPG or GIF or BMP or PNG/ with dimension about 200 x 100 px and name logo.* .

Clean languages – it allows erase all added languages except factory languages En+Cs (mark and click on perform)
Load language file – by click to empty button select the file and by click to „Make" is new language file loaded.
Save language file – after click on „Make" button will be performed language file export of just selected language

4.6.4 Style and language preparation

S**tyle file** is HTML file. WEBpage formating is included in this file. Requirement is basic knowledge of HTML language. For transparent editing we recommend use programm PSPad, symbols sada must be UTF8. Head of this file must be : <!--VIPM Style 3--> . **It is not possible** use style files from other door entry model.
LOGO – include to WEB page:

1. Prepare logo picture – dimension about 200px, name must be logo.*, format is JPG,GIF,BMP,PNG, but GIF is recommended for usage transparent logo (not frame) – for example **logo.gif**
2. Prepare HTML style file – reference style file is on WEB page www.alphatechtechnologies.cz
   This is part of style file with logo include – red is required, green is optional

```
…
</style>
<div class='container-div'>
<div class='header-div'>
<div class='header-sub'>
<h2>ALPHATECH TECHNOLOGIES s.r.o.   <img src="/logo.gif"
align="center" width="190" height="55" alt="Alphatechtechnologies
s.r.o."></h2>
IP-BOLD
<div class='header-right'>
INCLUDE_FLAG
</div>
```

To create new language we recommend following steps. Firstly make export of language file (language version of exported file is simultaneously selected language (flag in right top corner). Rename this file to new language and open in text editor (PSPad is recommended because file has rows ended by LF only and no CR+LF as usual). Character set select UTF8 and make translation. **Translation:** There is displayed a bit of the language file. Translates only the red marked part (texts), the rest must be left unchanged, otherwise violates file structure.

```
…
#sip parametry
SIP_TIT="SIP parameters"
SIP_MODE="SIP mode"
SIP_MODE_P2P="Peer-to-peer"
SIP_MODE_SRV="SIP server"
…
```

Save finished file (file name is language and no extension) and import to door entry. The flag will be assigned to language file automatically according row for example. SYS_FLAG="gb" for Great Britain.Country code examples (flag codes) are mentioned in bellow table:

CZ	Czech republic	NL	Holand
GB	Great britain	IT	Italy
SK	Slovakia	DE	Germany
ES	Špain	PL	Poland
FR	France	HU	Hungary
GR	Greece	PT	Portugal

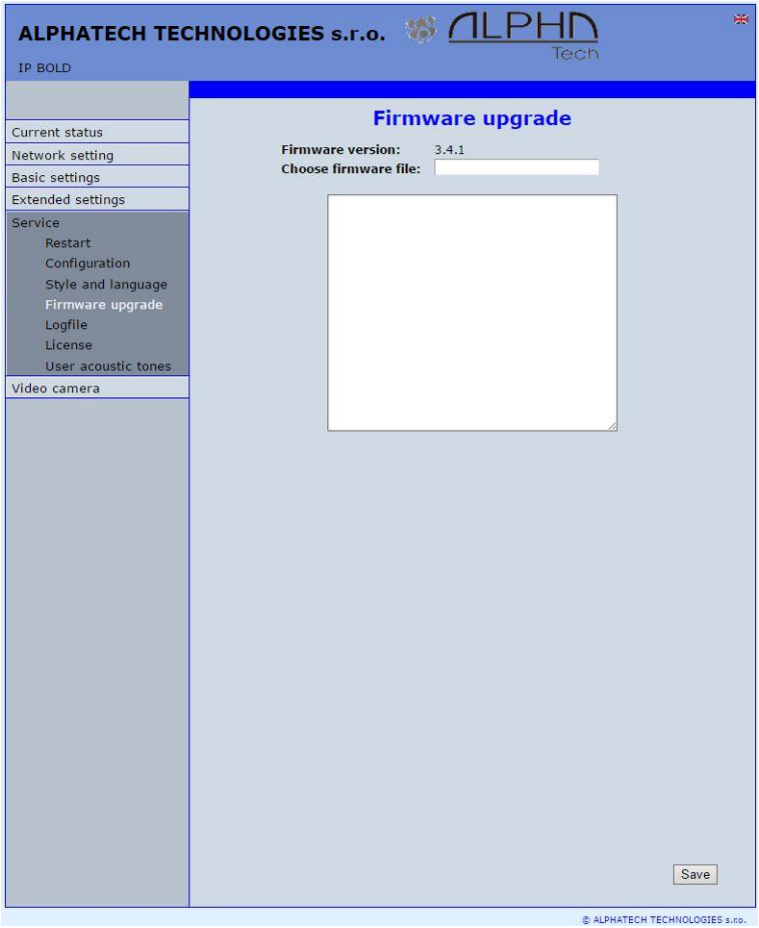
Further codes are according directive ISO-3166-1 alpha-2

Code examples of most often used languages:

Cs	czech	nl	Dutch
En	english	it	Italian
Sk	slovac	de	German
Es	spanish	pl	Polish
Fr	french	hu	hungarian
el	greek	pt	portuguese

Further language codes are according directive ISO 639-1

4.6.5 Firmware upgrade



Firmware version – display present firmware version in door entry IP VarioBell

Choose firmware file – by click to empty field select file with firmware (for example apt.firmware it is not file *.zip, but already unzip file – on website are firmware files packed to archive *.zip)

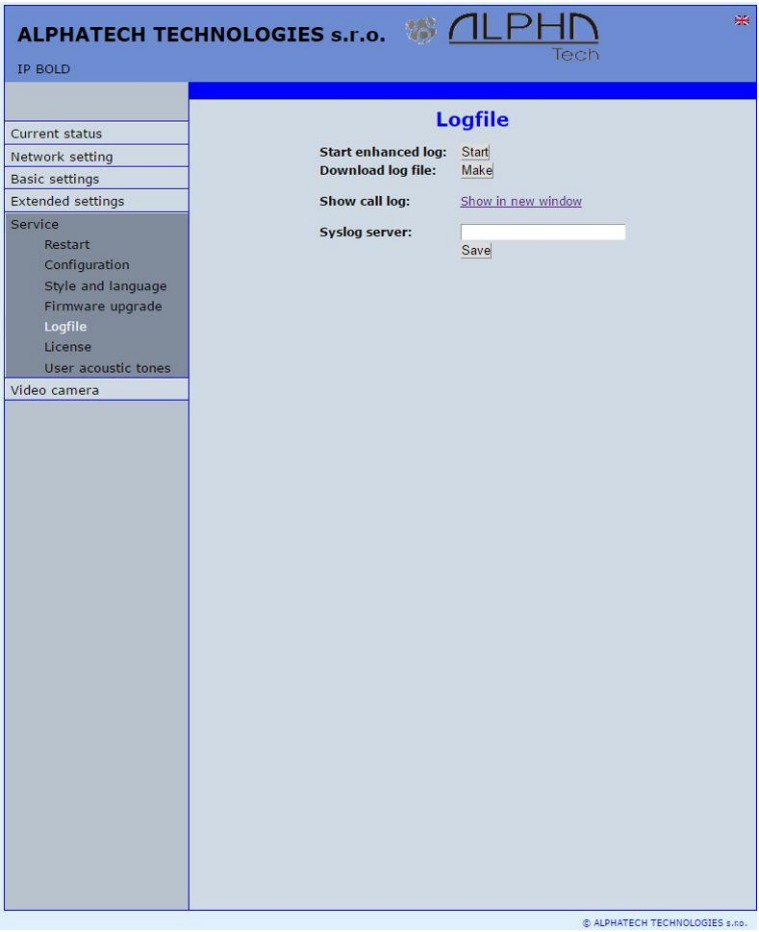
In Windows is display proces so firmware upgrade. When from any reason (power failure, network disconnection etc..) firmware upgrade is not finished then you find backup WEB interface for repeating of firmware upgrade.

If you have any problem so is possible by switch of DIP 2 switch to position on and restart on adress 192.168.1.250 you find backup WEB interface for repeating of firmware upgrade. Name is *admin* and password is *1234.* After, do **not forget** move back **DIP switch 2 to position OFF** !.

.

After firmware upgrade you must make restart of doorphone IP VarioBell.

4.6.6 Logfile



Start enhanced log – it is OFF in default to save processor efficiency. When you switch it ON then are save into internal memory detail information about door entry operation. It is very helpfull to solve different problems (compatibility etc..).

Download log file – after activation of enhanced log perform action which doesnt work correctly and immediatelly after performing click on button „Make". You save like this record of extended log file into file which you send to www.alphatechtechnologies.cz for further analyses (see procedure. below).

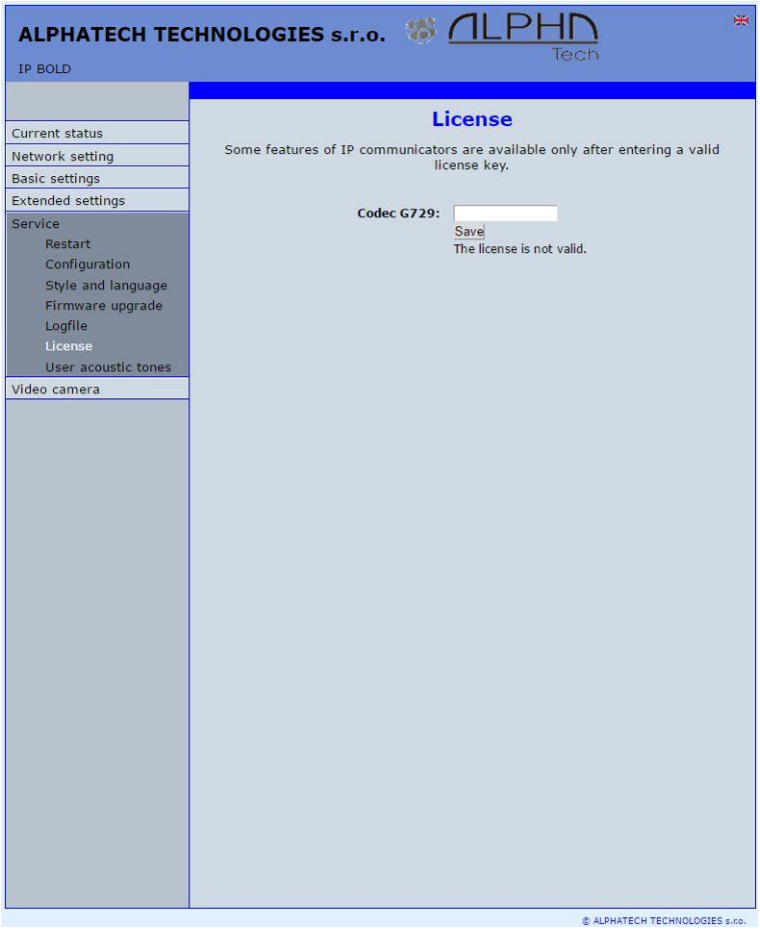
Show call log - in new WEB interface window are online display information about making calls.

Syslog server – IP adress or server name of syslog server where will be sent records about IP VarioBell door entry operation (do not forget setup NTP server for setting of internal door entry clocks otherwise records will be saved with incorrect date and time)

The procedure to download Enhanced LOG file. Really send by e-mail LOG downloaded file, do not send copies of screens, videos, etc.

1. Turn on enhanced LOG (click Start). Before this step, it is recommended to restart the IP VarioBell
2. Perform the action that you are interested in, where you have the problem
3. Immediately download the LOG file uploaded to your PC
4. This file be attached to e-mail a brief description of the problem and send (email contacts on www.alphatechtechnologies.cz)

4.6.7 License



This page allows extend door entry features about payable functions via licenses.For example audio codec G729.

After payment you receive license number by email

License validity shows if license is working correctly. The license code is connected to MAC number of door entry.

4.6.8 Sound files

This page is designed for recording own (user) sounds signalling. By click on „Play“ will be played currently active sound file (selection is permormed on page „Audio setting“ eventually sound of relay closing on page „Relays“).

Attention files are recorded on a microSD card!

Audio files: WAV – 8Kbit – mono – 16bit PCM

5 Technical parametres

5.1 Electrical parametres

Parametr	Value	conditions
Interface	Ethernet 10BaseT, 100BaseTx	
VoIP protocol	SIP 2.0 defined RFC3261	
Default IP address	192.168.1.250	
Audio	G.711u, G.711a, G.726-32b, GSM, G722, G729 (optional)	
Band range	300Hz – 3400 Hz	
Echo supression	Automatical	
Output power	Class D, 1W/8ohm, 94dB/1kHz/1m/1%	
Video	série JPEG, MJPG, stream H.263, H.264	
Resolution	Max. 640 x 480	
Camera angle	120deg H x 110deg. V	
Power supply - adapter	$12V_{DC}$ ± 2V , $12V_{AC}$ ± 1V	
- or PoE	IEEE802.3af Altern. A + B	
Max. consumption	300mA	12Vss
Max. switching voltage by relays	48V	when I < 1A
Max. switching current by relays	2A	when U < 30 V
Temperature range	- 20 to + 80°C	

5.2 Mechanical dimensions

Druh položky	rozměry VxŠxH [mm]			
	1 modul	2 moduly	3 moduly	2 x 3 moduly
Každý modul	100 x 100			
Montážní krabice	136x99x56	244x99x56	328x99x56	-
Lemovací rámeček	173x128	256x128	358x128	-
Krycí rámeček	178x130	281X130	383x130	383x230
Stříška	165x142x45	268x142x45	370x142x45	370x242x45
Kryt proti dešti KPD	165x142x80	268x142x80	370x142x80	370x242x80

Water proof and antivandal resistence of all models is IP44

5.3 Video parametres

Video formats: JPG, MJPG, H.263, H.264

Video for WEB:

I**nternet Explorer, Mozilla, Opera, Firefox…** - (set of JPG pictures - Port 80) it is used repeated http request „IPaddress/video.jpg“

programm PopUp (UDVguard) - (MJPEG stream - Port 80) is used http request „IPaddress/video.mjpg“ (sometimes is reload necessary to run).This video is more fluent and has less network strain.

Stream video for IP phones:

H.263 and H264 is established by IP VarioBell door entry and IPvideo phone over SIP/SDP protocol on standard SIP port. The video (as same as sound) then runs by RTP protokol on ports agreed over SIP (usually 9078).
rtsp request „rtsp://IPaddress/video.264“
or rtsp request „rtsp://IPaddress/video.263“

Video parametres:

JPG Pictures are created in IP modul and for all transmit protocols are the same .The Size (resolution) of video is selected in "Video setting" on WEB. Maximal resolution is defined by USB camera type and mostly is 640x480 Stream H.263 knows CIF resolution (352x288). It means bigger JPEG is cut and smaller framed.
Frequency (1-15 picture./sec) JPG Picture is selected in "Video setting" on WEB as Low – Optimal - Full.
Frequency MJPG and Stream H.263 coming from camera. It is used every second and reset is between 7-15 pictures/sec. Higher resolution brings decreasement of Pictures/ sec. (limited by processor efficiency)

Ports:

Port **80** for http (WEB pages even JPG / MJPG video on them)
Port **5060** for SIP
Ports RTP with oposite party communicates over SIP. Usually Port **7078** suggested for audio and Port **9078** for video
Port **554** video(H264 and H263) provided by door entry (server) protocol RTSP

Audio files: WAV – 8Kbit – mono – 16bit PCM

Setup: Default IP adress 192.168.1.250
name: admin / password: 1234
Video: name: video / password: 1234 (if required).

5.3.1 Requests

VIDEO:

JPG - http:// IPaddress /video.jpg
MJPG - http:// IPaddress /video.mjpg
H.263 - rtsp:// IPaddress /video.263
H.264 - rtsp:// IPaddress /video.264

RELAYs:

http:// IPaddress /relay_control?1=on
http:// IPaddress /relay_control?1=off

http:// IPaddress /relay_control?2=on
http:// IPaddress /relay_control?2=off

http:// IPaddress /relay_control?3=on
http:// IPaddress /relay_control?3=off

http:// IPaddress /relay_control?4=on
http:// IPaddress /relay_control?4=off

BUTTONs:

http:// IPaddress /button_control?btn=1 - remote activate btn 1
http:// IPaddress /button_control?btn=27 - remote activate btn 27

Guarantee conditions:
The product was shop-checked. The producer guarantees that this product will keep the features described in these operating instructions in the course of guarantee provided that the user will be handled with it as described in the operating manual. Particularly the warranty does not cover damage from improper intervention via **Telnet**. The guarantee will be extended by period of possible guarantee repair.
When claiming in guarantee period please contact your dealer. The producer only will make the guarantee repairs. Attach the description of claim reason, proof of purchase and your exact address to 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 user or other unauthorized person
- willful damage of product
- incorrect use of product caused by other use than specified in operating manual (e.g. installation, programming, improper use of **Telnet**)
- damages caused during product transport to customer and from supplier

Producer:
Dealer:
Date of sale:

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