

UNIVERSAL COMBIPHONE DOOR UNIT

Ref. 1148/1

Ref. 1148/2

Ref. 1148/4-6-14



INSTALLATION, PROGRAMMING AND FUNCTIONS MANUAL

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1 BASIC FEATURES

- The combiphone module Sinthesi S2 is a modular system that allows to install up to 99 buttons
- Voice communication is based on a telephone line: the module can be connected as a PABX analogue extension or directly under an analogue telephone line
- Impulse and tone (DTMF) options
- Storage of 2 24-digit long numbers per button (including *, #, Flash and day/night mode)
- Automatic Day/Night switch
- Option to prolong a call with * or #
- Option to activate two independent external relays through DTMF codes (with optional power)
- Two codes to open doors from the phone for 1-impulse and two codes for 2-impulse
- Potential to use up to 8 relay modes (for an additional bell, gradual or sequential door opening, lighting, etc.)
- Automatic answer to an incoming call with a variable number of rings
- Times control when digiting the password
- Programmable time before hanging up and make a new selection
- Programmable parameters for tone options, Flash length and Pause length
- Programmable time before starting a call
- Two codes to disconnect the call between external panel and an internal phone
- Option to program the module with a PC, the USB interface 1148/9 and remotely by calling the module through a DTMF telephone
- Integrated regulated heating of the PCB (with optional power)
- Name tag lighting (with optional power).
- 6 code locks for each relay
- Option to connect an exit button
- Option to disconnect a call by repeating pressing the call button
- Option to switch on a mode to suppress the DTMF connection from the microphone
- Option to switch on a 'ticking' sound into a call to announce another call
- Option to switch on acoustic signalling for relay connection
- Option to set the number of rings before connecting a call
- Programmable parameters for acoustic signalisation
- Programmable parameters for tone detection
- Electronic volume setting without the need to open the front cover
- Easy manual setting with the help of DIP switches
- Several default level options
- Unit earthed for better protection against static electricity

2 SYSTEM MODULES

The structural components of the system are: basic modules equipped with one or two buttons (1148/1 or 1148/2), 4-buttons modules (1148/4 and 1148/14), numeric keypad module (1148/6).



1148/1



1148/2



1148/4



1148/6



1148/14

2.1 INSTALLATION ACCESSORIES

MODULE HOLDER WITH FRAME FOR FLUSH-MOUNTING INSTALLATION



1148/61



1148/62



1148/63



1148/64

FLUSH-MOUNTING BOX



1145/51



11458/52



1145/53



1145/54

HOUSING WITH HOOD AND WALL FRAME FOR WALL INSTALLATION, TO BE COMPLETED WITH 1148/61-62-63-64 MODULES



1148/311



1148/312



1148/313



1148/314



1148/324

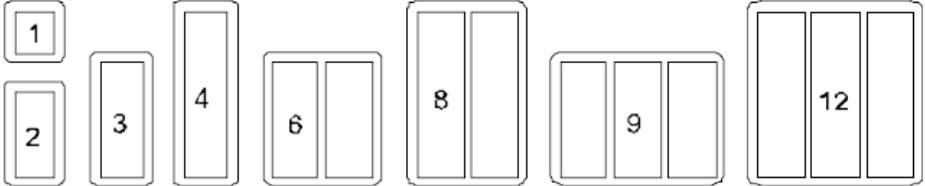


1148/326

RAIN HOOD FOR FLUSH-MOUNTING INSTALLATION

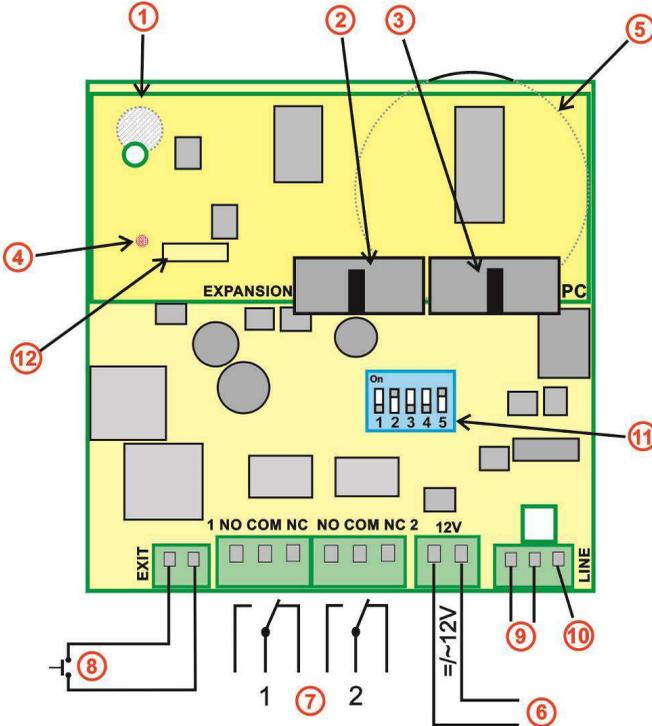
- 1158/611: for 1 module (1 row)
- 1158/612: for 2 modules (1 row)
- 1158/613: for 3 modules (1 row)
- 1158/614: for 4 modules (1 row)

FRAMES ASSEMBLY EXAMPLES



2.2 BASIC MODULE CONNECTION

The basic module is offered in 2 different options: with two buttons Ref.1148/2 and with one button Ref.1148/1.



Img. 1 - Door entry system motherboard – 1148/1 and 1148/2

1. **Microphone** (placed on the lower part of the motherboard) – be careful of the rubber seal of the microphone when changing the name tags, as the improper assembly may affect the acoustics.
2. Connection **expansion buttons** modules and **keyboard**
3. Connection point for a **PC** USB cable for PC connection.
4. **LED** indicator (placed on the lower part of the motherboard)
5. **Speaker** – at the lower part of the motherboard
6. 9000/230 **power supply** for:
 - relay controls
 - motherboard heating
 - name tag back lighting
 - internal power supply (DIP 3 and 4 set to ON)
 - power for exit button circuit.
7. **Relays** – are galvanically isolated, load is max. 48V, max. 1,5A
8. **Exit button** - works in current loop circuit. The length of connected conductors can be up to 500m. To work there must be the optional 9000/230 power supply connected to the terminal (6).
9. Analogue **telephone line** (the polarity is not important).
10. **Earth** – connection for an earth against static electricity – protecting the electronics of the door entry system and telephone system.
11. **DIP SWITCH:**

1 = Service – Default: OFF

For use when the password is forgotten. Incoming call then enters straight into programming where you can set new password (don't forget to switch it OFF again!).

2 = Heating – Default: ON

Starts integral heating to stop condensation during changeable temperatures.

3 = Integral power supply – Default: OFF

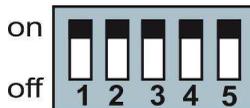
4 = Integral power supply – Default: OFF

Always switches 3 and 4 at the same time. They are always OFF except for the following 2 reasons:

- use of mode 7 or 8 – constant connection or disconnection of a relay is possible only with integral power supply. Don't forget to also set parameter 64 (as described on the complete manual available at website www.urmet.com).
- connection of the door entry system to the phone line switchboard that has problem with power supply after switching on.

5 = Name tag back lighting – Default ON

Switches ON/OFF led name tag back lighting next to the button.



POWER SUPPLY - TERMINAL (6):

Use the power supply 9000/230 for the following functions:

- **relay control**; if the relays are used on 7 or 8 mode, the dip switches 3 and 4 must be ON and it's necessary to set the parameter 64.
- **motherboard heating** (DIP 2 switches on, regulation of current according to voltage and temperature)
- **name tag back lighting** (DIP 5 switches on)
- **powering up the exit button circuit**

EXIT BUTTON –TERMINAL (8):

The exit button is used for a direct relay control. On each relay it is possible to set up a switch on one or on two impulses. It is possible to connect it with a cable up to 500m.

EXPANSION BUTTONS MODULES CONNECTION (REF. 1148/4) AND KEYBOARD (REF. 1148/6):

This bus enables you to connect additional buttons (up to 99) including a keyboard. Apart from the series data the bus also contains a power supply for the nametag back lighting. Each button module can process up to 8 buttons (the module 1148/4 contains 4 buttons and you can connect another 4 buttons with the 1148/14). It is also possible to connect a keyboard 1148/6 in position from 1 to 8; additional buttons can also be added with only-buttons module 1148/14. To simplify, a place can be determined as how many flat cables are between the keyboard and the motherboard, which is where the keyboard is connected.

The device can be connected to a PABX extension via the connector (9) or can be connected directly to the telephone line, up to a maximum distance of 300m.

The load of the power supply depends on the number of modules, since it simultaneously also supplies the key backlight. With the maximum number of connected modules, the absorption does not exceed 300mA.

This power source can also be used to power one or more electric locks; in this case, however, it will be also necessary to consider the absorption of the lock.

The power supply Urmet Sch. 9000/230 (12V/1A) largely meets these needs. For connecting the relay, refer to Img.1.

The relays are galvanically isolated from each other and from other circuits of the device (NO = normally open, NC = normally closed).

Note: *You should not connect the device to the extension used as emergency phone in case of power failure and is preferable disable access to the telephone line to which the extension is connected to.*

MODULES CONNECTION: REF.1148/4 and REF.1148/14

Button add-on modules are either active **Ref. 1148/4** (contains electronics) or passive **Ref.1148/14** (mechanical module Urmet – only buttons). The first add-on next to the basic module must be an active module (4 buttons). An active module is connected with a flat cable **K** - 10 wires (be careful about the direction of the connection). Next in line is passive module, connected with 5 conductors, the 2 yellow wires are used for powering the name tag back lighting (12V).

The module 1148/4 has 4 buttons and contains the electronics for connection to the basic module, to the 1148/14 4-buttons module or to the 1148/6 keyboard module.

The module 1148/4 must be connected to the main basic module with **flat cable K** provided, which can manage also the buttons and the back lighting.

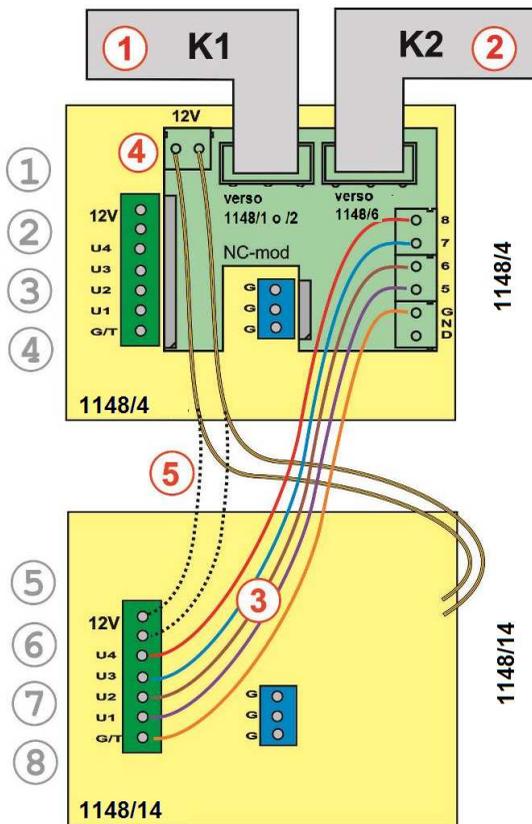
The module 1148/14 is always connected to the previous 1148/4 module. The connection is not prepared and it will be necessary to connect it with conductors (see lmg.2).

Connections with the flat cables are made easier by the connector locks, which prevent wrong insertion.

The connectors are directional:

- To the “1148/1 or /2” is the direction to the basic module,
- To the “1148/6” is the direction to the expansion module 1148/4 or keyboard module 1148/6

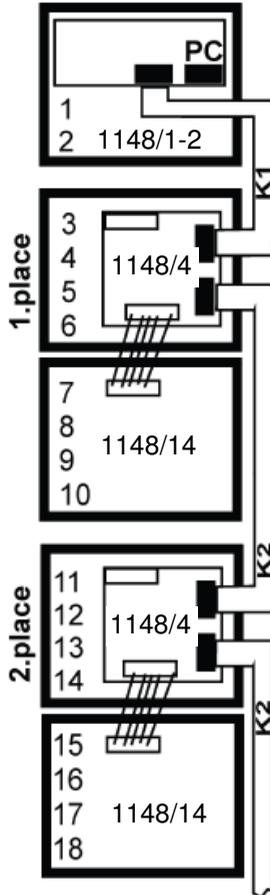
2.3 WIRING AND FLAT CABLE CONNECTION IN DETAIL



Img. 2 Connection of the modules 1148/4 and 1148/14, one level

- 1) Flat cable towards basic modules
- 2) Flat cable towards expansion modules
- 3) Electrical connection for 1148/14 module
- 4) Connection for nametag lighting
- 5) Alternative connection for nametag lighting

MODULES CONFIGURATION EXAMPLE



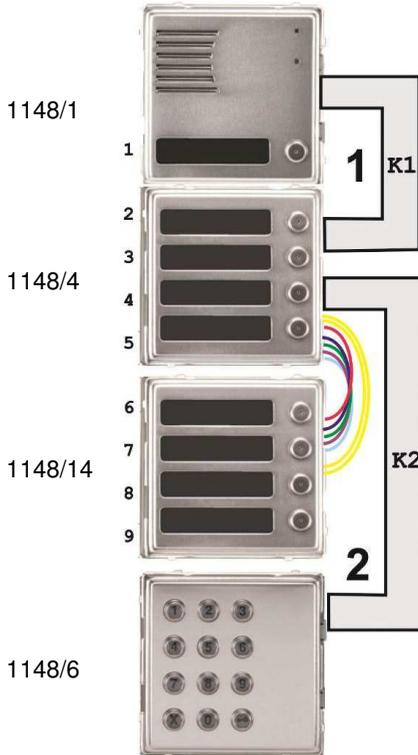
Img. 3 Connection of the modules 1148/4 and 1148/14, two level

2.4 1148/6 KEYBOARD CONNECTION

The connection of the keyboard module is done with one of the 2 flat cables furnished, starting from the module 1148/1-2 or 1148/4; the only difference is that the keyboard module can only be connected to the first 8 places following the basic modules. In addition to that, the keyboard module must be the last one of the modules connected. Img. 4 shows the position of keyboard module, 1148/6, where it is connected in second place after the basic module, (there are 2 cables between the keyboard and basic module).

Be careful when programming – It is necessary to determine exactly where the keyboard is connected (see parameter **48** described on the complete manual, section Programming).

Img. 4 also shows the position of the 4-button module with a keyboard connected. The number of buttons on the basic module is set with parameter **6#** (section Programming).



Img. 4 Example of connection: 1148/1, 1148/4, 1148/14 and 1148/6

The keyboard has 2 basic modes for dialling the phone numbers (parameter 49).

- **Direct choice of phone numbers** – press numbers on the keyboard like you would on a phone (max. 24 digits)
- **Choice from the door system's memory** – press only 2 digits on the keyboard i.e. a memory address (01- 99). This option saves the connected buttons, as it is easier to use a smaller number of buttons for direct dialling from the memory file if you have a larger number of users.

Note: *button 1 on the basic module uses the same memory of telephone number as option 01 on the keyboard – there memory for up to 99 day-time numbers and 99 night-time numbers, the keyboard uses the same memory as the buttons!*

You can set the DTMF dialling option with parameter 40 during a phone call (section Programming).

Whatever programming is made, the button  disconnect or cancel.

2.5 INSTALLATION OF THE DEVICES

Flush mounting

For this type of installation use the mounting boxes 1145/51-52-53-54 and possibly the rain hood 1158/611-612-613-614. Be careful about the orientation of the openings; for the assembly if you use the built-in box 1145/51 - must be in vertical axis.

The protective frame, which provides the coverage of the irregularities once walled box, and the rain hood, needed for the installations in outdoor areas, constitute other accessories useful for this type of installation.

Wall-mounted installation

For this type of installation use the enclosures with built-in rain hood 1148/311-312-313-314. If your installation is in an environment with the possibility of condensation (sudden temperature changes) or rain, it is recommended to put the **DIP switch 2** in position **ON** - Active heating.

The board heating has two positive functions: in part heats the circuits in winter and in part prevents the formation of condensation inside it.

2.6 CONNECTION

The basic function (activation and deactivation of a call) only requires the connection of a telephone line (Img. 1 → Line 9). The line is connected with two conductors (a, b) and generally has a voltage of 24V - 60V, short circuit 20mA - 60mA. During the conversation, the line voltage is 7V - 10V.

Line Activation – The 1148/1 or /2 Sinthesi S2 module emits a tone (Reset) if it was previously disconnected from the line for a certain period of time (see tone table of the complete manual).

The 1148/1 or /2 Sinthesi S2 module is an analog combiphone designed to be connected to an analog telephone line. The polarity of the telephone line is not relevant. The module works based on the configuration of the programming parameters.

Parallel connection - it is not recommended, because the parallel connection with another door phone or telephone line causes technical problems. Also it is not possible to use different devices for a line switching (adapters of intelligent line, etc.).

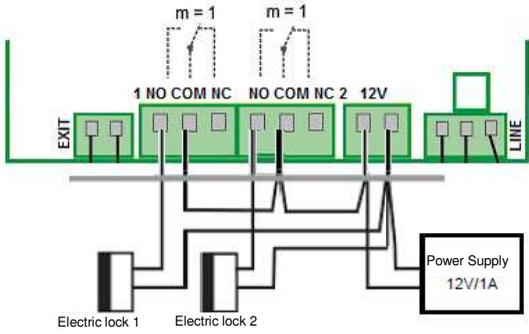
The relay (Img.1 → 7) have multiple uses; some connection examples are shown on the next page. To make the system work properly you need to connect the power supply 9000/230. The Door Phones system is designed so that all parts are galvanically isolated. The telephone line is separate feeder and also the relay contacts are galvanically isolated from other parts of the intercom system. This avoids interference issues and interactions.



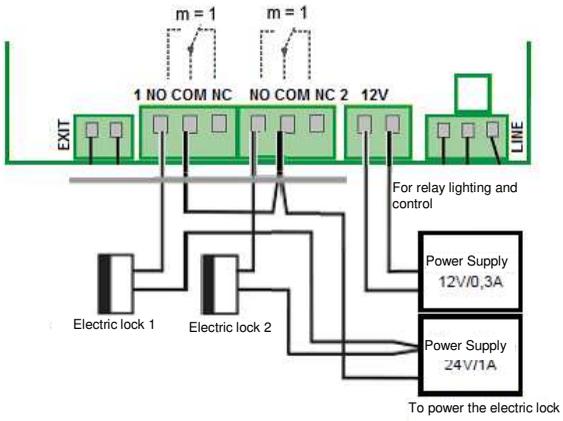
ATTENTION !!! Connect to relay only SELV circuits. Maximum current allowed by the contacts 1A@48V oppure 1,5A@30V.

RELAY CONNECTION EXAMPLES

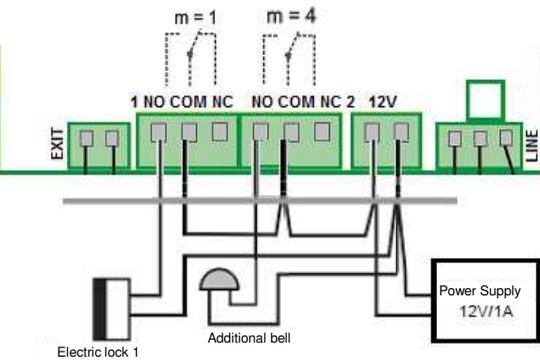
EXAMPLE 1



EXAMPLE 2



EXAMPLE 3



1. **Basic connection:** 2 electric locks and the possibility to manage two doors independently (relay mode 1 and 2 → $m = 1$) or the gradual opening of a door (relay mode 2 → $m = 5$).
2. **Two power supplies:** ability to use two power supplies, one for the 1148/1 module or / 2 and one for an electric door lock. The electric lock 2 is connected in reverse (fire safety door).
3. **Combination of an electric lock and an additional bell.** The relays for additional bell can be in $m = 4$ mode (each key activates it for a period of time configured) or $m = 6$ mode (activated by a default key for a duration of time configured).
4. **Combination with electric door and electric gate**
5. **Gate opening with impulse relay and light switching environment (SELV or relay) with relay ON / OFF;** in this case it is essential to use an external power supply since the relay 2 remains constantly switched (DIP3-DIP4 → ON)

N.B. The examples are purely for illustrative purposes.



Note: Urmet 1148 Sinthesi S2 system is designed so that you can connect 10-18Vac or 11-24Vdc to 12V terminals (polarity is not relevant). The heating device of the motherboard is equipped with a controller so that the resistances do not burn as a result of an increase in tension.

2.7 ACCESSORIES

USB programming interface

The USB interface 1148/9 is used to program by pc the combiphone door unit Sinthesi S2. From the Download area of website www.urmet.com are available:



- Software and USB interface driver for PC installation.
Download → Software → Technical Software → Communication → Combiphone Door Unit (Note: for registered users only)
- The complete programming software manual.
Download → Documentation → User Manuals

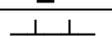
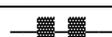
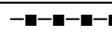


3 Door Entry System Operation

The door entry system's functions are set by establishing parameters (see the section of parameter programming).

3.1 Signalling overview

The combiphone Sinthesi S2 acoustic signals occur during its operation. Samples of sounds can be listened to in the setting programme Urmet-1148-tel.

State	Tones	Tone frequency
Pick up line type 1		980-1333-1650
Disconnection of line type 1		1650-1333-980
Pick up line type 2		800-1067-1200-1333
Disconnection of line type 2		1333-1200-1067-800
Confirmation of command from the phone		800
Ticking during a call		
Notice about the end of a call		1333
Relay switch signal		Modulated
Entry into programming from the phone		980-1067-1180
Programming from the phone		Modulated
Parameter confirmation		800
Entry into programming from the PC		980-1067-1180
Line connection (Reset)		1850-1067-1850
Error (generally something is not right)		800
Empty memory (no number is programmed)		1300-2100

It is useful to know what tones the combiphone Sinthesi S2 plays during installation as it will assist in the analysis of its state and operation. The sounds can be turned off in several levels (*parameters 61,62,63 and 65*).

3.2 Caller at the door

The door entry system's buttons are labelled in the same way as normal doorbell buttons. Visitor finds the appropriate name and presses the button. The combiphone 1148 will pick up a line, "plays" the pick up line tone (if not disabled, see par. 62) and dials the phone number saved under that button (*parameter 1 or 2* depending on system mode). From the combiphone speaker a ringing tone will be heard and the user phone will ring. As soon as the user called picks up he can talk to his visitor. If an electric lock

is also connected to the combiphone, the user can press a DTMF code on his phone and let visitor in. If he hangs up the phone the combiphone will disconnect. If the call lasts longer than the pre-set limit (*parameter 52*), 10sec before disconnection the combiphone will send a line disconnection tone, but the user can dial * or # (*parameter 42*), to prolong the call for the length of time set in *parameter 52*.

The dialled number depends on the mode set in the system (*parameter 47*):

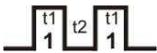
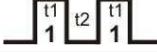
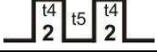
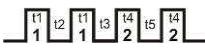
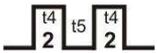
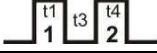
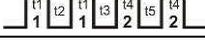
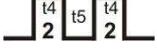
- **Day/Night Mode** = if the system is in 'Day' mode, it dials the number set in *parameter 1*, if the system is in 'Night' mode, it dials a number set in *parameter 2*. The switching over the modes manually is set in *parameters 45, 46*.
- **2 groups of numbers Mode** = the first press of the button always dials a number set in *parameter 1*. Following the repeated pressing of the same button, when it detects a busy tone (10sec after choice), or after a pre-set number of rings (*parameter 56*) the system dials a number from the second group (*parameter 2*). After another press of the same button the system will again dial the number from the first group (or after detecting a busy tone on the dialling of a number from the group 2 the repetition ends).

If a visitor presses the button after the system has picked up, the system will disconnect for a length of time as set in *parameter 54* before it picks up the line and dials a new number. The number choice takes place either by tone (DTMF) or impulse according to the setting in *parameter 41*. There is one more option, disconnection of line after repeat pressing of the same button (*parameter 4**).

It is possible to control a relay switch (**code lock**) with the first 10 buttons. If visitor at the door presses buttons in the correct combination according to a pre-programmed code (*parameter 32-34*) and the length of time between presses isn't greater than the pre-set time (*parameter 53*) the system picks up, switches the appropriate relay (if it is set in mode m=1 or m=5) for the length of time given in *parameter 37 or 39,30* and then disconnects.

Relays can switch on one or two impulses depending on control code with the length of time between impulses set in *parameter 30*.

3.2.1 Tab. 1 – Table of relay controls

Mode m = 1 (parameter 3111 and 3121)			
Action	Note	Parameter	Relay
Evaluation of correct internal code from the buttons	According to setting Day/Night	3211-3215	
		3311-3315	
		3411-3415	
	According to setting Day/Night	3221-3225	
		3321-3325	
		3421-3425	
	According to setting Day/Night	321*	
		331*	
According to setting Day/Night	341*		
	322*		
According to setting Day/Night	332*		
	342*		
Internal code from the phone	Option to choose 1 or 2 digits of code 2 digit code is basic and it is possible to shorten it by using * in the first place of code during programming	351	
		352	
		361	
		362	
Mode m = 5 (parameter 3125)			
Action	Note	Parameter	Relay
Evaluation of correct internal code from the buttons	According to setting Day/Night	3211-3215	
		3311-3315	
		3411-3415	
	According to setting Day/Night	3221-3225	
		3321-3325	
		3421-3425	
	According to setting Day/Night	321*	
		331*	
According to setting Day/Night	341*		
	322*		
According to setting Day/Night	332*		
	342*		
Internal code from the phone	Option to choose 1 or 2 digits of code 2 digit code is basic and it is possible to shorten it by using * in the first place of code during programming	351	
		352	
		361	
		362	

Mode m = 4			
Action	Note	Parameter	Relay
Press buttons	Any number other than in 311* or 312*	3114	
		3124	
	Button set in 311* or 312*	3114	
		3124	
Mode m = 6			
Action	Note	Parameter	Relay
Press of the button	Any number other than in 311* or 312*	3116	-
		3126	-
	Button set in 311* or 312*	3116	
		3126	

Note t1 – time of connection of relay 1 (*parameter 371*)
t2 – time between impulses of relay 1 (*parameter 301*)
t3 – time between connections of relay 1 and 2 (*parameter 39*)
t4 - time of connection of relay 2 (*parameter 372*)
t5 - time between impulses of relay 2 (*parameter 302*)

3.2.2 Outbound call

An outbound call is a call from the combiphone system (i.e. started by a visitor). Once the system has been dialled, a phone inside of the building rings and on pick up it is possible to talk to the visitor at the door. By choosing a code it is possible to switch on a relay (*parameter 35*) if it is set in mode m=1 or m=5, switch over the Day/Night mode (*parameter 45, 46*) and disconnect the connection (*parameter 43*). 10sec before the end of the call (*parameter 52*) the system sends a notice about the end of the call but choosing a code (*parameter 42*) it is possible to prolong the call. By replacing the handset the call is terminated (the switchboard phone will send a system busy tone and the system will disconnect). There is one more option, disconnection of line after repeat pressing of the same button (*parameter 4**).

3.2.3 Incoming call

An incoming call is a call to the 1148 module made by a telephone which dialled the number of the line where the 1148 is connected. After choosing the branch the system is connected and the line rings, following a set number of rings (*parameter 51*) the system will then pick up and it is possible to speak. The options are the same as an 'outgoing call'.

- One exception is in the first 10sec. when it is also possible to input '# and a service password' (*parameter 44*) directing the system to go to the programming mode.
- Another exception is during incoming call and DIP1 is switched to on when the system also goes to the programming mode (without a service password).

- The final exception is relay controls (*parameter 381 and 382*), when an incoming call can disable the relay controls.

3.2.4 Door Entry System with keyboard – 1148/6 module

If a keyboard module is connected to the system, then it is necessary to set the following parameters:

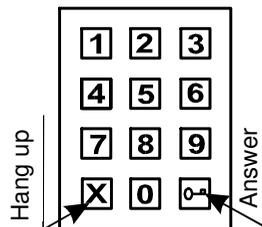
- parameter 48 – rank of the keyboard. If it is 'set 0', the keyboard is not there, if it is 'set 1 – 8', then this number represents a position where the keyboard is connected on the BUS (represents the number of flat cables between the keyboard and the basic module).
- parameter 49 – keyboard mode.
 - If it is 0, then the phone number from the keyboard is dialled in the same way as from a phone. The visitor enters a number combination and after a length of time, set by the max time between key presses (*parameter 53*), the combiphone picks up and dials the given number.
 - If 1 then the keyboard chooses a 2 digit combination 01-99 as per the memory address, where a telephone number is saved. The memory is the same (shared) as the button memory. The number choice depends on the Day/Night setting.
- parameter 40 – chooses the DTMF from the keyboard during a call.
-

Parameter value 40	Meaning of symbol 
0	No DTMF from the keyboard
1	DTMF *
2	DTMF #
3	DTMF A

The keyboard has 2 functioning keys – **key symbol**  = before pressing a combination of digits corresponding to control relays. Second key – **symbol X**  = after pressing the system always disconnects.

Choosing number on the keyboard can be done in two ways (*parameter 49*):

- visitor chooses keys like on a phone – the length of time between the presses must be less than the time given in *parameter 53*, after this the system picks up and dials the given number.
- Visitor chooses a 2 digit number (from 01 to 99), which represents a memory number where a number is saved (max. 24 digits long) as per the buttons. The number choice depends on the setting mode (i.e. Day/Night) or by 2 groups of numbers mode (as described in paragraph 5.1).



3.3 Acoustic path setting

The principle of setting acoustic paths:

Here we have three parameters 71,72 and 73 Using the interaction of these parameters can be set to sound in different conditions.

1. Quiet environment parameters 71,72,73 are set to 7
2. Environment where is a strong ambient noise at the communicator and quiet environment at the phone. Here is both necessary to reduce the microphone gain (parameter 72 = 1-3) and also change the ratio of the parameters 71/73, encreasing the parameter 73 (parameter 73 = 11-15) and reducing the parameter 71 (71 = 2-4).
3. Environment where is a strong ambient noise at the phone and quiet environment at the communicator. Here we leave the parameter value of 72 = 7 and 73 and 71 parameters set as follows - parameter71 = 11 to 14 and 73 = 2 to 4

The principle of parameters setting is - signal from the microphone is amplified by the sum of parameters **72+71 = volume of microphone** and signal to the speaker is amplified by the sum of parameters **71+73 = volume of speaker**. To switch the direction of the ratio is evaluated parameters (**threshold**) $73/72$.

- If parameter 72 is greater than the parameter 73, thus favoring the direction from the microphone. We choose when the direction to the phone is interrupted.
- If parameter 73 greater than parameter 72, thus favored direction to the speaker. We choose this if the interrupted sound in the speaker of communicator.

4 Parameter programming

4.1 Programming with the help of a phone

4.1.1 Entry into the programming

There are two ways to enter the combiphone programming system:

1. **With the help of a password** –incoming calls only! – pick up a phone and dial the number that the combiphone is connected to (*either the number of the branch, if you are connected to a switchboard line, or the number of the line to the building, where the combiphone is and ask to be connected to the branch to which the combiphone is connected*). The module will pick up (you will hear the pick-up tone – see paragraph 3.1), within 10 secs. press '**#xxx**', where xxx is the service password to enter the programme system (**in the basic setting xxx=0000**), if correct there will be a programming entry tone followed immediately by a programming tone.
2. **With the help of DIP 1** – incoming call only! – connect to the combiphone as in part 1 above, but where the DIP switch is in position 1 “on”, the combiphone will go straight to the programming mode – you will hear the pick-up tone for entry to programming followed immediately by the programming.

Do not forget to put DIP switch to position “off” at the end.

4.1.2 Parameter programming

The default state for programming is announced with a programming tone, the combiphone always returns to this state after a specified time (5sec), whether you started programming or not.

There are two types of parameters used during programming. These are parameters with a **fixed length**, which is the majority of them, when programming is confirmed after it fulfils the mandatory length and is immediately ‘written in’ with a **confirming tone** and parameters **with variable length** (*parameters 1,2,32,33,34*) when the **confirmation** is made only after time of inaction (5 sec). The only case when there is an immediate ‘writing in’ of parameters is when the maximum number of ‘written in’ signs (numbers) are filled up, for parameters *1 and 2* it is 24, for parameters *32,33,34* it is 6.

If you input a number (sign) that is unacceptable during the programming the combiphone immediately sends an **error tone**, the parameter is not ‘written in’ and the combiphone reverts to a default state where it is possible to either repeat the parameter programming or start programming a different parameter.

The combiphone will automatically disconnect form the programming mode after a period of inaction, 30 sec. With each DTMF tone dialled the time will always resets to 30 sec. It is also possible to end the programming mode by choosing parameter 9.

Note. *If you want to keep a connection opened during the programming (prolong the 30 sec time) mode, i.e. before a customer decides what else he wants to be set, then you can press * or #. The combiphone immediately answers with an error tone but will prolong the time before disconnecting.*

5 Description of programmable parameters

Parameters always start with a fixed/mandatory part (address) followed by a variable part, which is your choice. The range and explanation is always under the table, sometimes with examples. Everything is dialled exactly as it is shown in the table, nothing needs to be confirmed in any way, after writing into a memory a confirmation tone can be heard and if an incorrect value is input then an error tone will be heard.

5.1 Direct dialling - memory

Parameter	Value	Meaning	Basic
1	tt nn...	number nn under button tt	-

tt – button number (memory), always input 2 digits [01-99]

nn – telephone number as long as 24 digits that are to be saved. For saving of other sign choices always use the assignation as per the table.

Numbers saved in parameter 1 are numbers of the **first group**, or numbers of the **Day** mode.

Basic settings never change or delete these saved numbers.

meaning	choice
0 - 9	0 - 9
#	#
*	**
Flash	* #
Pause	* 0

Parameter	Value	Meaning	Basic
2	tt nn...	number nn under button tt	-

tt – button number (memory), always input 2 digits [01-99]

nn – telephone number as long as 24 digits that are to be saved. For saving of other sign choices always use the assignation as per the table.

Numbers saved in parameter 2 are numbers of the **second group**, or numbers of the **Night** mode.

Basic setting never change or delete these saved numbers.

meaning	choice
0 - 9	0 - 9
#	#
*	**
Flash	* #
Pause	* 0

Examples of setting:

1. first button is supposed to dial 358 during the day and 0603441296 during the night, then the programming is - 101358 and wait for 🎵, then 2010 *0 603441296 and wait for 🎵
2. second button is supposed to dial 123#1*2Flash3 during day and night, then the programming is 102123#1 ** 2 *# 3 and wait for 🎵, then 202123#1 ** 2 *# 3 and wait for 🎵

Note. If you are not using Day/night mode or 2 groups of numbers mode, then it is recommended to set Day/Night mode (*parameter 47*) and then set the same code for switching over Day/Night (*parameters 45 and 46*). This way ensures that the combiphone will always be in Day mode and you can only programme telephone numbers for the day mode (*parameter 1*).

5.2 Relays

Parameter	Value	Meaning	Basic
31	r m	relay r operates in mode m (1-8)	11 21

r – relay number [1-2]

m – relay mode [1-8 for **r=1** is not mode **m=5**]

The modes **m=1, 4, 5, 6** are explained in detail in Relay Modes Table.

m=1 mode **relay** – switched on with command (internal code) or with a password (external) 1 impulse for length of time $t1/t4$ (use for electric locks) or 2 impulses when it switches on for time $t1/t4$, off for $t2/t5$ and again switches on for $t1/t4$ (opening of sliding gates).

m=2 is switched on for time when the line is picked up (**camera**) – switches on when system picks up and off when it disconnects.

m=3 is switched on for time when the line is picked up and extra time $t1/t4$ after disconnection (**lights**) - switches on for time when the line is picked up and extra time $t1/t4$ after disconnection (for this time the line is busy, with version is after switching DIP 3, 4 and setting of *parameter 64* line after $t1/t4$ disconnected)

m=4 **button** mode– switched on when any button is pressed and off after $t1/t4$ (use is for example connection of external bell or siren)

m=5 **gradual opening** mode – it is possible to set only relay 2, because relay 1 will then automatically be set to **m=1**. With command (internal code) or password (external code) relay 1 is activated for length of time $t1$, then time $t3$ is running before relay 2 is switched, then relay 2 is activated for time $t4$ and after the system disconnects. If given command or password answers to 2 impulses then in the sequence there will be always 2 impulses separated by time $t2/t5$. Explanation is in Tab.1.

Note. *Command or password for relay 1 starts the whole sequence, if you use command or password for relay 2 then only relay 2 is controlled in the same way as in **m=1** mode.*

m=6 switches on depending on pressed button (it is set in parameter 31r*). In this way it is possible to choose only **one button** for each relay, which when pressed switches on relay for time $t1/t4$. This mode is used instead of connecting separate doorbell to the system.

m=7 **permanent switch on** / off – only for switching (DIP 3, 4). With command for 1 impulse it is switched on, for impulse 2 is off. The system remembers its state even after the line is disconnected. This mode is used for watering, green house opening, switching on heating etc.

m=8 function not available at the moment

Parameter	Value	Meaning	Basic
31	r* tt	button tt switches on relay r in m=6 mode (01-99)	01

r – relay number [1-2]

tt – module button number, always in two digits [01-99]

This parameter is only for relay mode **m=6**. Value **tt** determines which button activates the **r** relay for time $t1/t4$.

Parameter	Value	Meaning	Basic
32	rp hh...	In Day + Night mode password hh... for relay r , in order p=1-5 for 1 impulse and p=* for 2 impulses (00-999999)	-
33	rp hh...	In Day mode password hh... for relay r , in order p=1-5 for 1 impulse and p=* for 2 impulses (00-999999)	-
34	rp hh...	In Night mode password hh... for relay r , in order p=1-5 for 1 impulse and p=* for 2 impulses (00-999999)	-

r – relay number [1-2]

p – order [1 - 5] for 1 impulse. 5 passwords (external codes) from combiphone buttons (external code of code lock)

p – order = * to set password (external code) for 2 impulses

hh... – password (external code) for relay switching on from button or keyboard [2 to 6 places]. Buttons 1 - 10 are programmed as numbers 1-0.

Switching on a relay is affected by the relay **mode** and the choice **Day/Night**, if the **2 groups of numbers** mode is set, the system is constantly in **DAY** mode. See chapter 5.1

There are several rules that needs to be followed when setting a password:

- Choose the first button of password from buttons that are the least used for direct dialling (-prolonging time) (n/a for keyboard).
- Be mindful about conformity of numbers (i.e. when 1 password contains another for example for relay 1 it is 1234 and for relay 2 12345) as the first password will start the action once button 4 is pressed and you will never be able to input button 5 to start action for password 2, and if you choose 234 for a second relay, then after pressing 4 both relays will start.

Note. When setting parameter **32,33,34** signs # and * are not used because they are not on the button panel, number 0 represents button no. 10.

Parameter	Value	Meaning	Basic
35	r aa	command aa from phone for switching relay r 1 impulse (00-99,*0-*9)	155 266

r – relay number [1-2]

aa – command (internal code) for switching on the relay from the phone [2 spaces]
/1

To set the same commands for both relays (internal code) so that both relays activate at the same time. It is also recommended that the same command is set for 'relay on' and 'command to disconnection of system (*parameter 43*) **aa=bb**.

/1 – command is always 2 digits, but if you wish to control relay with a single digit from the phone, there is an option to input **"*a"**, where **a** is a single number and the star represents an empty space and must be in the first place.

Example:

1 relay switch on internal code 48 – is programmed **35148** ♪

2 relay switch on internal code 8 - is programmed **352*8** ♪

By choosing no 8 on the phone we switch on just the second relay, with option 48 we switch on both relays

Parameter	Value	Meaning	Basic
36	r cc	command aa from phone for switching relay r 2 impulses (00-99,*0-*9)	150 260

r – relay number [1-2]

cc – command (internal code) for switching on the relay from the phone [2 spaces]/¹
To set the same command for both relays (internal code) so that both relays activate at the same time

¹ – command is always 2 digits, but if you wish to control relay with a single digit from the phone, there is an option to input **"*a"**, where **a** is a single number and the star represents an empty space and must be in the first place.

Switching a relay on with 2-impulses is used for sliding gates replacing a gate entry.

Example:

Command for switching on 2 relays 1 impulse is for example ***8**, the command for disconnection is ***8** and the command for switching on 2 relays 2 impulses is ***9**.

Programming: **352*8** ♪ , **432*8** ♪ , **362*9** ♪.

If you are in conversation with the combiphone, the command to open a gate would be button **9**, the first impulse starts and the gate opens, the second impulse stops it, the time the gate is opened "opened space" is set by time between the impulses (*parameter 30*) after people enter press **8**, then combiphone makes 1 impulse and disconnects, gate closes.

Parameter	Value	Meaning	Basic
37	r ss	time ss [sec] of relay r on for time t1/t4 (01-99)	105 205

r – relay number [1-2]

ss – time t1 / t4 for which relay 1 / 2 is switched on [2 spaces 00-99], where time 00 means 0,5sec

Parameter	Value	Meaning	Basic
38	r p	relay r control during incoming call (0/1)	11 21

r – relay number [1-2]

p – parameter whether it is allowed **p=1** or disallowed **p=0** to control relay during incoming call.

Parameter	Value	Meaning	Basic
39	xx	time xx [sec] between switching on relays 1 and 2 in m=5 mode - time t3 (01-99)	10

xx – time t3 between switching on relays 1 and 2 when **m=5** mode is set (gradual opening) [2 spaces 00-99]], where time 00 means 0,5sec

Parameter	Value	Meaning	Basic
30	r zz	time zz [sec] between impulses for switching on relay r 2 impulses- time t2/t5 (01-99)	105 205

r – relay number [1-2]

zz – time **t2 / t5** between first and second impulse for switching on relay 1 / 2 [2 spaces 00-99], where time 00 means 0,5sec

Parameter	Value	Meaning	Basic
3*	r e	Relay activation through Exit button (see fig.1)	10 20

r – relay number [1-2]

e – exit button mode: **e=0** - off, **e=1** – on for 1 impulse, **e=2** – on for 2 impulses

5.3 Basic parameters

Parameter	Value	Meaning	Basic
41	v	Type of choice v – time/impulse (0/1)	0

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

Parameter	Value	Meaning	Basic
42	z	Sign for call prolonging (* / #)	*

z – sign for prolonging a call * or # (10secs. before the end of the call the combiphone sends signal, after pressing it prolongs the call)

Parameter	Value	Meaning	Basic
431	bb	Command for disconnecting the combiphone from the phone (00-99,*0-*9)	55
432	bb	Command for disconnecting the combiphone from the phone (00-99,*0-*9)	66

NOTE. It is advantageous to set the same command for relay switching on (*parameter 35,36*) and command for the combiphone disconnection.

Parameter	Value	Meaning	Basic
44	xxxx	Service password (0000-9999)	0000

xxxx – service password to programme from a phone (DTMF)



If you forget the password, the following procedure is recommended:

1. Open the combiphone front cover
2. Switch 'DIP 1' to 'ON'
3. Call the combiphone

4. Once the combiphone picks up the system is in programming mode. In this mode it is possible to change the password 44xxxx
5. Switch 'DIP 1' to 'OFF'
6. Close the front cover.

Parameter	Value	Meaning	Basic
45	dd	Command for switch over to DAY (00-9,*0-*9)	11
46	nn	Command for switch over to NIGHT (0099,*0-*9)	10

Dd command to switch over to the **DAY** mode [2 spaces] /¹

Nn command to switch over to the **NIGHT** mode [2 spaces] /¹

¹ command is always 2 digits, but if you wish to switch over from Day to Night with a single digit from the phone, there is an option to input "*a", where **a** is a single number and the star represents an empty space and must be in the first place (e.g. parameters 35,36)

Note. The Day/Night switch over mode stays set following line disconnection.

Parameter	Value	Meaning	Basic
47	e	System choice mode (0/1)	1

e – Choice of mode numbers **e=0** selects numbers from first and second group, **e=1** selects numbers in accordance with the **Day/Night** mode.

 **WARNING !!** setting this parameter materially affects the number dialling!

Parameter	Value	Meaning	Basic
48	c	Keyboard connection (0-8)	0

c – **c=0** connecting the 1148/4 module to the basic module only

c=1 - 8 keyboard connected to the first to eight place

 **WARNING !!** setting this parameter materially affects whole systems function!

Parameter	Value	Meaning	Basic
49	o	Keyboard Mode (0/1)	0

o – **o=0** chooses a number like a phone (input the whole number)

o=1 input a 2 digit number (memory) on the keyboard, where the number is saved into the memory (the memory number is the same as button number and respects Day/Night switch over – numbers 01 - 99)

 **WARNING !!** setting this parameter materially affects keyboard function!

Parameter	Value	Meaning	Basic
40	d	Chooses DTMF from the keyboard during a call (0-3)	0

d – **d=0** during a call it is **not** possible to dial DTMF from the keyboard

- d=1** DTMF can be dialed, the Key button dials *
- d=2** DTMF can be dialed, the Key button dials #
- d=3** DTMF can be dialed, the Key button dials A

Parameter	Value	Meaning	Basic
4*	k	Line disconnection function by repeatedly pressing a button (0/1)	1

- k** – Repeatedly pressing the same button to disconnect the line (if still active):
k=0 function disabled **k=1**.function enable

 **WARNING !!** setting of this parameter materially affects number dialling!

5.4 Time parameters

Parameter	Value	Meaning	Basic
51	q	Number of rings before the combiphone picks up (1-9)	2

- q** – The number of rings before an incoming call is picked up. The combiphone picks up between rings 2 secs. after detecting the **q**-th ring. It is possible to set the number of rings between 1 and 9.

Parameter	Value	Meaning	Basic
52	d	Maximum length of a call (0-9,*,#)	2

- d** – The maximum length of time for which the combiphone is busy. It is possible to prolong this time during the call by choosing a key (* or #) from the phone (*parameter 42*). The setting of this time is in accordance with the adjacent table.

Time [min]	Option
0,5	0
1 - 9	1 - 9
15	*
30	#

Parameter	Value	Meaning	Basic
53	w	Time between button presses (1-9)	2

- w** – maximum time [in seconds] between button presses [range 1 - 9]
- **Normal buttons**
 - **Relay switch on** – if the time between presses is longer than time **w**, then the code will not work correctly.
 - **Choice of number** – if the pressed button is the first number of a password to switch on a relay then the choice is delayed by time **w**.
 - **Keyboard**

- **Switch on Relay** – if the time between presses is longer than the time **w** then the code will not work correctly.
- **Choosing of number**
 - Choose from the phone, if the time after the last pressed button is longer than time **w**, then the choice commences, if the number is incomplete, it is necessary to disconnect (press the **X** key ) and repeat the choice
 - Choose from the memory, if the time after the last pressed button is longer than the time **w**, then the choice needs to be repeated.

Parameter	Value	Meaning	Basic
54	z	Time of disconnection for repeat dialling (1-5)	2

z – Time [secs.] the combiphone disconnects before it picks up again for repeat dialling (press of a button during a call, detection of busy tone) [range 1-5].

Parameter	Value	Meaning	Basic
55	z	Time before commencing a choice (1-5)	1

z – Time [sec] after the combiphone picks up, before it begins a choice [range 1-5]. This time is different for each switchboard phone system, but generally most operate within 2 seconds after a line is picked up.

Parameter	Value	Meaning	Basic
56	hh	Number of rings before disconnecting the current call (04-99)	12

hh This function is available also if it is set the mode of dialling 2 groups of numbers.

Parameter	Value	Meaning	Basic
500	x	Medium frequency of tone detector (1-0)	3 (375-475Hz)
501	y	Number of busy tones (2-0)	4
502	z	Time length of permanent tone (1-5)	3 (3s)

- x** Medium frequency of tone detector is set if there is a non-standard signal from the telephone switchboard.
- y** Minimum number of busy tones necessary for detection [2-0], where 0 means 10 busy tones.
- z** Minimum length of time of a permanent tone (for detection of notification tone at branch switchboard) [1-5 sec].

Parameter	Value	Meaning	Basic
503	tt	Tone length of time for DTMF (tone) choice (04-16)	10 (100ms)
504	mm	Time of gap between DTMF tones (04-16)	10 (100ms)
505	f	Length of flash time (1-6)	1 (100ms)
506	p	Length of time of pause/digit gap (1-0)	4 (800ms)

tt Length of DTFM tone choices is specified by the formula:

(entered number) x 10 = time length of tone [ms]

[range 04-16 which is 40-160ms]

m Length of gap between DTMF tone choices is specified by the formula: **(entered number) x 10 = time length of gap** [ms] [range 04-16 which is 40-160ms]

f Length of flash is specified by the formula:

(entered number) x 100 = time length Flash [ms]

[range 1-6 which is 100-600ms]

p Length of pause is specified by the formula:

(entered number) x 100 + 400 = time length of pause

[ms] [range 1-0 which is 500-1400ms]

Time **p** is the simultaneously length of gap between button taps for an impulse choice.

frequency [Hz]	x - choice
275-375	1
325-425	2
375-475	3
425-525	4
475-575	5
525-625	6
575-675	7
625-725	8
675-775	9
725-825	0

Parameter	Value	Meaning	Basic
507	uu	Transmit level of DTMF choice v [-dBm] (04-16)	10

uu Transmission level of (DTMF) choice to the line, the range is -4 to -16dBm, input the required level where uu=04 is -4dBm, uu=10 is -10dBm

Parameter	Value	Meaning	Basic
508	p	Pre-emphase DTMF (0/1)	0
509	S	Listening in DTMF – level (1-4)	2

p Pre-emphase is the ratio of the upper and lower groups of DTMF frequencies. It is possible to choose ratio 2.2 dB - p=0 (Europe) or ratio 3.2dB - p=1 (Australia)

s Choice of **DTMF** volume levels (4 levels):

Volume in DTMF [dB]	s - choice
-15	1
-9	2
-3	3
+3	4

5.5 System parameters

Parameter	Value	Meaning	Basic
61	z	Acoustic signals (confirmation, error, empty memory, end of call) (0/1)	1

The combiphone comes with standard acoustic signals. However, using parameter “z” it is possible to switch off the acoustic signals. The values are:
z=0 Acoustic signals **off** / z=1 Acoustic signals **on**.

Parameter	Value	Meaning	Basic
62	v	Acoustic signals introduction/conclusion (0/1/2)	2

The acoustic signals for the connection and disconnection of a line are standard, but this may cause false choices with some phone systems. So using parameter “v” it is possible to switch off these signals. The values required are:
z=0 Introduction/conclusion signalisation is off
z=1 Pick up and disconnection signalisation on (intro/concl.- type1)
z=2 Pick up and disconnection signalisation on (intro/concl.- type2).

Parameter	Value	Meaning	Basic
63	u	Acoustic ticking signal during a call (0/1)	0

Ticking during a call is switched off as standard. However, by switching it on you can differentiate on the switchboard a call from the combiphone by a faint ticking. The values are:
u=0 Ticking into a call is off / u=1 Ticking into a call is on

Parameter	Value	Meaning	Basic
64	w	Internal power supply from connected supply 12V (DIP 3,4 set to ON) (0/1)	0

The external power supply is turned off as standard.
You only need to turn this function on if the combiphone relays operate in **m=7** or **m=8** mode. The parameter activation **w=1** is determined setting DIP switch 3 and 4 to "ON".
Off - **w=0**.

Parameter	Value	Meaning	Basic
65	z	Acoustic signals for switching on a relay (0/1)	0

The acoustic signal for switching on a relay is disabled by default, **z=0**. However, it is possible to use this function when using the optional power supply, so when the door lock is open there is **no** buzzing so the person at the door won't know the door is open. When set to **z=1** the time the relay is switched (door open) then there is a specific sound.
Note1 This function is available only for **m=1** and **m=5** mode.

Note2 During the relay switch-on (2 impulses) there is acoustic signal for the whole time of the sequence (even during gap between impulses).

Parameter	Value	Meaning	Basic
66	i	Suppression of the reception DTMF from the microphone (0/1)	0

Suppression of the reception DTMF from the microphone is off as a default **i=0**. It is possible to open the door with a personal dialler without disturbing a person inside the building. For higher security it is possible to switch on the suppression function **i=1** and stop a person with an unauthorised copy of the DTMF code from entering.

Parameter	Value	Meaning	Basic
67	b	Signalization of not set button (0/1)	0

This function is turned **off** as standard **b=0**, so after pressing a button with an empty memory there is an error acoustic signalization. By switching on this function **b=1** the acoustic signal for an empty memory is cancelled.



Warning: During the first 10 seconds of a call the tone detector is inactive (there is a pause before the switchboard responds or number dialling by the switchboard).

Default is off **m = 0** By enabling the **m = 1** mutes the acoustic path at close relay (1 or 2) in

Parameter	Value	Meaning	Basic
68	b	Mute at the lock activated (0/1)	0

"electric lock" (modes 1 and 5). This feature is there because if you often use code lock function or exit button, so the switch-on time to hear the tone exchange. For some customers, this can be distracting.

Parameter	Value	Meaning	Basic
6#	s	Setting of the number of buttons on the main panel.	2

This parameter has the purpose to identify the no.1 button in the composition of the module. After entering the number of buttons **s** the button no 1 is moving so it is always first.

Number of buttons on the main panel	s - choice
0	0
1	1
2	2



WARNING !! setting this parameter materially affects number dialling.

Parameter	Value	Meaning	Basic
6*	t	Delayed start for no-Urmet switchboards with line testing (0/1)	0

This function is off as standard **t=0**. By switching this function on **t=1** the processor goes into sleep mode immediately after the line connection, and after 3 secs. The combiphone initialises. The line connection after the power supply connection is then delayed - state switching on/restarting of the switchboard. If this function is not working and the telephone switchboard still identifies a line fault, then there is no other option but to use an internal power supply, by switching over **DIP switch 3 and 4** to "on".

5.6 Parameter setting Hands Free



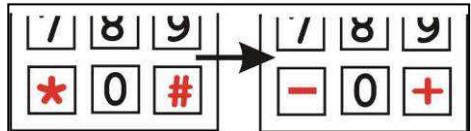
Hands Free parameter setting must be changed only by qualified staff

First ensure that the rubber seal on the microphone fits properly, otherwise setting the acoustic parameters will be difficult.

Parameter	Value	Meaning	Basic
71	gg	Reception volume 01-16 (16 is the highest) (SPK)	07
72	ff	Transmission volume 01-16 (16 is the highest) (MIC)	07
73	rr	Speaker volume 01-16 (16 is the highest) (TRH)	07

gg/ff/rr Each number is entered as 2 digits with a range 01-16. After receiving a confirmation tone 🎵 the new value is immediately active and can be tested.

Stops for the maximum and minimum volume are acoustically signalled (3 tones like the signal for the end of a call). If you don't press anything for 5 seconds then the 'set value' is saved and you hear a confirmation tone 🎵.



WARNING !! Default values are set by the manufacturer and it is not recommended that you change them unless absolutely necessary.

Parameter	Value	Meaning	Basic
74	c	Soft transition of switch over (0/1)	1

By default this function is set to **ON (c=1)**, it is a character of the semi-duplex operation switch over on the telephone line. If the character of silencing is too steep, it is possible to soften it using **c=0**.

Parameter	Value	Meaning	Basic
-----------	-------	---------	-------

75	n	Suppression of background noise (0/1)	1
-----------	----------	---------------------------------------	---

By default this function is set to **ON (n=1)**, suitable for noisy location. This is related to setting of parameters 71, 76, 77.

Parameter	Value	Meaning	Basic
76	b	Threshold for switching on the microphone 1-4 (4 is the highest)	2

There is a simultaneous signal from the microphone and the speaker on the telephone line, to ensure that the combiphone doesn't produce acoustic feedback. In the Hands Free circuit there are several functioning blocks for suppressing this feedback. The basic one is a circuit for semi-duplex operation, where the incoming signal weakens the microphone and the signal from the microphone weakens the incoming signal. Thresholds for switching on the microphone are set in this parameter, the lower the value the higher the sensitivity of the microphone. In noisy surroundings it is recommended to use a higher value with combination of parameters 71,75, 77.

Parameter	Value	Meaning	Basic
77	s	Speed of switching over voice atomisation 1-4 (4 is the slowest)	2

Parameters 75, 76 describes the principle of acoustic feedback and the speed with which the circuit switches over, the quality of incoming or outgoing sounds are set with parameter 77.

Switchover time [ms]	s - choice
1	1
2	2
4	3
8	4

Parameter	Value	Meaning	Basic
78	l	VA characteristic for line connection (0/1)	1

Nearly every country in the world has different telephone norms and this parameter enables you to lower the voltage on the combiphone terminals to connect telephone line voltages in active state by 1V. Where it is required the respective norm **l=0** lowers line voltage by 1V, as standard it is **l=1**.

Parameter	Value	Meaning	Basic
79	k	Compensation for loss of conduit depending on line current (0/1/2)	1

The combiphone has a circuit for installations remote from the switchboard (>100m) that can compensate for the loss caused by a conduit. This function is switched **off** as

standard **k=0**, but it is possible to set on 2 levels, depending on the current that switchboard can supply (short circuit current I_0).

Switchboard current I_0	k - choice
Function off	0
20mA-50mA	1
45mA-75mA	2

Parameter	Value	Meaning	Basic
70	uu	Level of signal transmission v [-dBm] (04-16)	10

uu The signal transmission range to the line is -4 to -16dBm, entered is required level, which is uu=04 is -4dBm, uu=10 is -10dBm ...

6 Basic setting and parameters Reset

Parameter	Value	Meaning	Basic
8#	#	Basic setting	provide

This setting does not affect parameters **1** and **2** (numbers saved in memory)

Parameter	Value	Meaning	Basic
81		Deletes all numbers in 1st group (Day mode)	
82		Deletes all numbers in 2nd group (Night mode)	
83		Basic setting only for parameters 3x	only 3..
84		Basic setting only for parameters 4x	only 4..
85		Basic setting only for parameters 5x	only 5..
86		Basic setting only for parameters 6x	only 6..
87		Basic setting only for parameters 7x	only 7..
80		Basic setting only for parameters 0x	only 0..

Parameters 81 and 82 deletes all numbers saved in the button memory.

Parameters 83 – 87,80 deletes selective basic setting for parameters starting with 3,4,5,6,7,0. Values for the basic setting are stated for each parameter in the right hand - column "Basic".



WARNING !!! deletion is irreversible and it would be necessary to programme them again!

6.1 End of programming

Parameter	Value	Meaning	Basic
9		END of programming	

After choosing **9** programming tone from the keyboard telephone used for the programming, the combiphone disconnects.

6.2 Parameter overview

Parameter	Value	Meaning	Basic
1	tt nn...	number nn under button tt	-
2	tt nn...	number nn under button tt	-
31	r m	relay r works in m (1-8) mode	11 21
31	r* tt	button tt causes switching on of relay r in m=6 mode (01-99)	01
32	rp hh...	In DAY + NIGHT mode password hh... for relay r , in order p=1-5, for 1 impulse and p=* for 2 impulses (00-999999)	-
33	rp hh...	In DAY password mode password hh... for relay r , in order p=1-5, for 1 impulse and p=* for 2 impulses (00-999999)	-
34	rp hh...	In NIGHT mode password hh... for relay r , in order p=1-5, for 1 impulse and p=* for 2 impulses (00-999999)	-
35	r aa	command aa from the phone for switching on relay r 1 impulse (00-99,*0-*9)	155 266
36	r cc	command aa from the phone for switching on relay r 2 impulses (00-99,*0-*9)	150 260
37	r ss	time ss [sec] of relay r switch on for time t1/t4 (01-99)	105 205
38	r p	Control of relay r during incoming call (0/1)	11 21
39	xx	period xx [sec] between switching on of relays 1 and 2 in m=5 mode – time length t3 (01-99)	10
30	r zz	period zz [sec] between impulses for switching on 2 impulses of relay r – time length t2/t5 (01-99)	105 205
3*	r e	Exit button for relay r (0/1/2)	10 20
41	v	Type of choice v – ton/impulse (0/1)	0
42	z	Sign for call prolonging (* / #)	*
43	g bb	Command for combiphone disconnection from the phone (00-99,*0-*9)	155 266
44	xxxx	Service password (0000-9999)	0000
45	dd	Command for switch over to DAY (00-99,*0-*9)	11
46	nn	Command for switch over to NIGHT (0099,*0-*9)	10
47	e	System choice mode (0/1)	1
48	c	Keyboard connection (0-8)	0
49	o	Keyboard mode (0/1)	0

Parameter	Value	Meaning	Basic
40	d	Choice DTMF from the keyboard during a call (0-3)	0
4*	k	Line disconnection by repeat press of the same button (0/1)	1
51	q	Number of rings before the combiphone picks up (1-9)	2
52	d	Maximum length of call (0-9,*,#)	2
53	w	Time between button presses (1-9)	2
54	z	Time of disconnection for repeat choice (1-5)	2
55	z	Time before choice begins (1-5)	1
56	hh	Number of rings before disconnection (04-99)	12
500	x	Medium frequency of tone detector (1-0)	3 (375-475Hz)
501	y	Number of busy tones (2-0)	4
502	z	Length of time for permanent tone (1-5)	3 (3s)
503	tt	Length of time for DTMF (tone) choice (04-16)	10 (100ms)
504	mm	Length of time for gap between DTMF tones (04-16)	10 (100ms)
505	f	Length of time Flash (1-6)	1 (100ms)
506	p	Length of time for pause/inter-digit gap (1-0)	4 (800ms)
507	uu	Level of transmission of DTMF choice uu [-dBm] (04-16)	10
508	p	Pre-emphase DTMF (0/1)	0
509	S	Listening in DTMF – level (1-4)	2
61	z	Acoustic signalisation (confirmation, error, empty memory, end of call...) (0/1)	1
62	v	Acoustic signalisation Intro/Concl. (0/1)	2
63	u	Acoustic signalisation ticking into a call (0/1)	0
64	w	Internal power supply from connected supply 12V (DIP 3,4) (0/1)	0
65	z	Acoustic signalisation for relay switch on (0/1)	0
66	i	Suppression of reception DTMF from microphone (0/1)	0
67	b	Signalization of not set button (0/1)	0

Parameter	Value	Meaning	Basic
68	b	Mute at the lock activated (0/1)	0
6#	s	Setting of number of buttons on the main panel	2
6*	t	Delayed start for switchboards with line tests (Siemens) (0/1)	0
71	gg	Reception volume 01-16 (16 is the highest) (SPK)	07
72	ff	Transmission volume 01-16 (16 is the highest) (MIC)	07
73	rr	Speaker volume 01-16 (16 is the highest) (TRH)	07
74	c	Soft transition of switchover (0/1)	1
75	n	Suppression of background noise (0/1)	1
76	b	Threshold for switching on the microphone 1-4 (4 is the highest)	2
77	s	Speed of switching over voice atomisation 1-4 (is the slowest)	2
78	l	VA characteristic for line connection (0/1)	1
79	k	Compensation for loss of conduit depending on line current (0/1/2)	1
70	uu	Level of signalisation transmission in [-dBm] (04-16)	10
8#	#	Basic setting	provide
81		Deletes all numbers in 1st group (Day mode)	
82		Deletes all numbers in 2nd group (Night mode)	
83		Basic setting only for parameters 3x	only 3..
84		Basic setting only for parameters 4x	only 4..
85		Basic setting only for parameters 5x	only 5..
86		Basic setting only for parameters 6x	only 6..
87		Basic setting only for parameters 7x	only 7..
80		Basic setting only for parameters 0x	only 0..
9		END of programming	

7 Technical parameters

Parameter	Value	Conditions
Minimum line current	18mA	Line picked up
Minimum line voltage	18V	Line disconnected
Voltage on the line when the combiphone picks up (VA characteristic)	< 8V < 12V	I = 20mA I = 60 mA
Lead in in disconnected state	< 30uA	U = 60V
Impedance of line ending	220R + 820R paral. 115nF	Line picked up
Bandwidth	300Hz – 3400 Hz	20 - 60mA
Impedence of ringing	> 2Kohm	25 – 60 Hz
Sensitivity of ringing detector	min. 10 – 25 V	
Impulse choice	40 / 60 ms	
Power supply for name tag back lighting, relay, heating and current circuit for exit button	Urmet: Ref. 9000/230	
Max off take of backlighting and heating	250mA	12Vss
Max. Voltage of relay contact	48V	When I < 1A
Max. Current of relay contact	1,5A	When U < 30 V
Operating temperature	- 20 to + 60 st.	
Level of cover	IP45	
Weight	Depends on variation and composition	

8 Table for easy programming

Fill in the values you want to programme into the empty part of the table, in the double framed part there are whole programming commands to make programming easier. You can keep the programmed values in the manual for future changes.

Meaning		Programming sequence		N° of Digits
description	specify	par.	Fill the values	
Number under button 1	Day/1° group	101		24
Number under button 2	Day/1° group	102		24
Number under button 3	Day/1° group	103		24
Number under button 4	Day/1° group	104		24
Number under button 5	Day/1° group	105		24
Number under button 6	Day/1° group	106		24
Number under button 7	Day/1° group	107		24
Number under button 8	Day/1° group	108		24
Number under button 9	Day/1° group	109		24
Number under button 10	Day/1° group	110		24
Number under button 11	Day/1° group	111		24
Number under button 12	Day/1° group	112		24
Number under button 1	Night/2° gr.	201		24
Number under button 2	Night/2° gr.	202		24
Number under button 3	Night/2° gr.	203		24
Number under button 4	Night/2° gr.	204		24
Number under button 5	Night/2° gr.	205		24
Number under button 6	Night/2° gr.	206		24
Number under button 7	Night/2° gr.	207		24
Number under button 8	Night/2° gr.	208		24
Number under button 9	Night/2° gr.	209		24
Number under button 10	Night/2° gr.	210		24
Number under button 11	Night/2° gr.	211		24
Number under button 12	Night/2° gr.	212		24
Relay 1 works in mode	m=1 - 8	311		1
Relay 2 works in mode	m=1 - 8	312		1
Passw. for relay 1 (1 imp.)	Day+Night	3211		6
Passw. for relay 1 (1 imp.)	Day+Night	3212		6
Passw. for relay 1 (1 imp.)	Day+Night	3213		6

Passw. for relay 1 (1 imp.)	Day+Night	3214		6
Passw. for relay 1 (1 imp.)	Day+Night	3215		6
Passw. for relay 1 (2 imp.)	Day+Night	321*		6
Passw. for relay 2 (1 imp.)	Day+Night	3221		6
Passw. for relay 2 (1 imp.)	Day+Night	3222		6
Passw. for relay 2 (1 imp.)	Day+Night	3223		6
Passw. for relay 2 (1 imp.)	Day+Night	3224		6
Passw. for relay 2 (1 imp.)	Day+Night	3225		6
Passw. for relay 2 (2 imp.)	Day+Night	322*		6
Passw. for relay 1 (1 imp.)	Day	3311		6
Passw. for relay 1 (1 imp.)	Day	3312		6
Passw. for relay 1 (1 imp.)	Day	3313		6
Passw. for relay 1 (1 imp.)	Day	3314		6
Passw. for relay 1 (1 imp.)	Day	3315		6
Passw. for relay 1 (2 imp.)	Day	331*		6
Passw. for relay 2 (1 imp.)	Day	3321		6
Passw. for relay 2 (1 imp.)	Day	3322		6
Passw. for relay 2 (1 imp.)	Day	3323		6
Passw. for relay 2 (1 imp.)	Day	3324		6
Passw. for relay 2 (1 imp.)	Day	3325		6
Passw. for relay 2 (2 imp.)	Day	332*		6
Passw. for relay 1 (1 imp.)	Night	3411		6
Passw. for relay 1 (1 imp.)	Night	3412		6
Passw. for relay 1 (1 imp.)	Night	3413		6
Passw. for relay 1 (1 imp.)	Night	3414		6
Passw. for relay 1 (1 imp.)	Night	3415		6
Passw. for relay 1 (2 imp.)	Night	341*		6
Passw. for relay 2 (1 imp.)	Night	3421		6
Passw. for relay 2 (1 imp.)	Night	3422		6
Passw. for relay 2 (1 imp.)	Night	3423		6
Passw. for relay 2 (1 imp.)	Night	3424		6
Passw. for relay 2 (1 imp.)	Night	3425		6
Passw. for relay 2 (2 imp.)	Night	342*		6
Button choice for 1 relay	m=6	311*		2
Button choice for 2 relay	m=6	312*		2
Switch on r 1 from phone	1 impulse	351		2

Switch on r 2 from phone	1 impulse	352		2
Switch on r 1 from phone	2 impulses	361		2
Switch on r 2 from phone	2 impulses	362		2
Length of time for r 1 switch on	[sec]	371		2
Length of time for r 2 switch on	[sec]	372		2
Control of r 1 during incoming call	1 / 0	381		1
Control of r 2 during incoming call	1 / 0	382		1
Length of time between switch on r 1 and 2	[sec]	39		2
Length of time between impulses of r 1	[sec]	301		2
Length of time between impulses of r 2	[sec]	302		2
Exit button for r 1	0/1/2	3*1		1
Exit button for r 2	0/1/2	3*2		1
Type of choice tone / imp.	0 / 1	41		1
Sign for prolonging of call	* / #	42		1
Combiphone disconnection from the phone		431		2
Combiphone disconnection from the phone		432		2
Service password		44		4
Command for switch over to DAY		45		2
Command for switch over to NIGHT		46		2
System choice mode	1 / 0	47		1
Keyboard connection	0/1-8	48		1
Keyboard mode	1 / 0	49		1
choice DTMF from keyboard	0/1/2/3	40		1
Disconnection by repeat press of the same button	0 / 1	4*		1
Number of rings for pick up		51		1
Maximum length of time	[min]	52		1
Time between button presses	[sec]	53		1
Time of disconnection for repeat choice	[sec]	54		1
Time before choice commences	[sec]	55		1
Number of rings before disconnection		56		2
Frequency of tone detector	table	500	ms	1
Number of busy tones		501		1

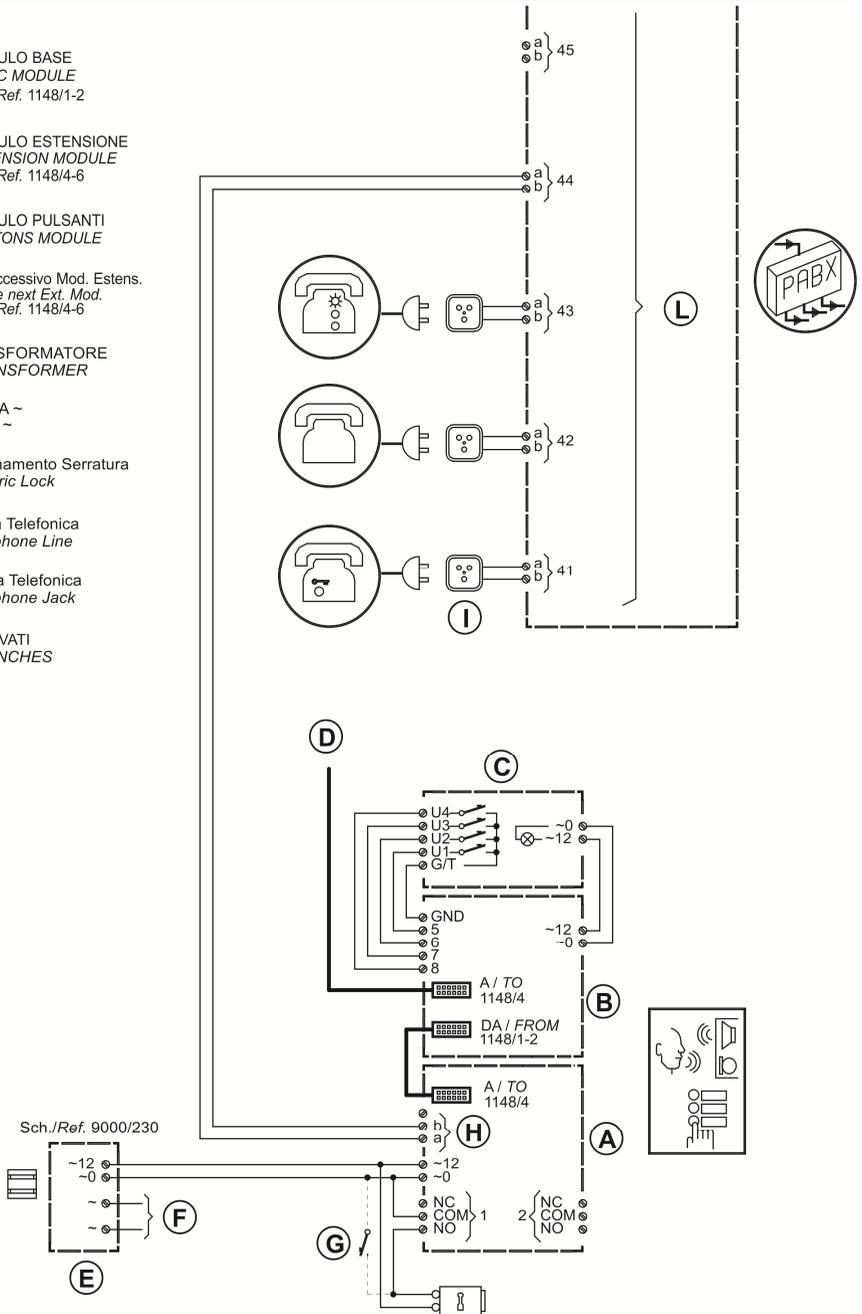
Length of time of permanent tone		502	sec	2
Length of time of tone choice	nn x 10	503	ms	2
Gap between DTMF tones	nn x 10	504	ms	2
Length of time Flash	n x 100	505	ms	1
Length of time of pause / gap	n x100+400	506	ms	1
Transmitting level DTMF	04-16	507	-dBm	2
preemphasis DTMF	0 / 1	508		1
Listening in DTMF - level	1-4	509		1
Acoustic signalisation (other)	0 / 1	61		1
Acoustic signalisation Intro/Concl.	0 / 1	62		1
Acoustic sign. ticking	0 / 1	63		1
Internal power supply from 12V	0 / 1	64		1
Signal tone turning on relay	0 / 1	65		1
Suppression of reception from microphone	0 / 1	66		1
Signalization of not set button	0 / 1	67		1
Mute at the lock activated	0 / 1	68		1
N° of buttons on the panel	Type dependant	6#		1
Delayed start (i.e non Urmet pabx)		6*		1
Reception volume (TRH)	01-16	71		2
Transmitting volume (MIC)	01-16	72		2
Speaker volume (SPK)	01-16	73		2
Soft transition of switch over	0 / 1	74		1
Suppression of background noise	0 / 1	75		1
microphone switch on threshold	1 - 4	76		1
Speed of switching over voice atomization	1 - 4	77		1
VA characteristic	0 / 1	78		1
Compensation for loss of conduit	0 / 1 / 2	79		1
Level of signalisation transmission	04 - 16	70	-dBm	2



WARNING !!! Parameters from 70 to 79 must be modified only by qualified staff.

9 Basic connection diagram

- (A)** MODULO BASE
BASIC MODULE
Sch./Ref. 1148/1-2
- (B)** MODULO ESTENSIONE
EXTENSION MODULE
Sch./Ref. 1148/4-6
- (C)** MODULO PULSANTI
BUTTONS MODULE
- (D)** Al successivo Mod. Estens.
To the next Ext. Mod.
Sch./Ref. 1148/4-6
- (E)** TRASFORMATORE
TRANSFORMER
- (F)** LINEA ~
LINE ~
- (G)** Azionamento Serratura
Electric Lock
- (H)** Linea Telefonica
Telephone Line
- (I)** Presa Telefonica
Telephone Jack
- (L)** DERIVATI
BRANCHES



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