GUINAZ

VIDEOPORTEROS
VIDEO DOOR ENTRY SYSTEMS

DIGITAL TELEPHONE INTERFACE
REF. R3615

INSTALLATION GUIDE
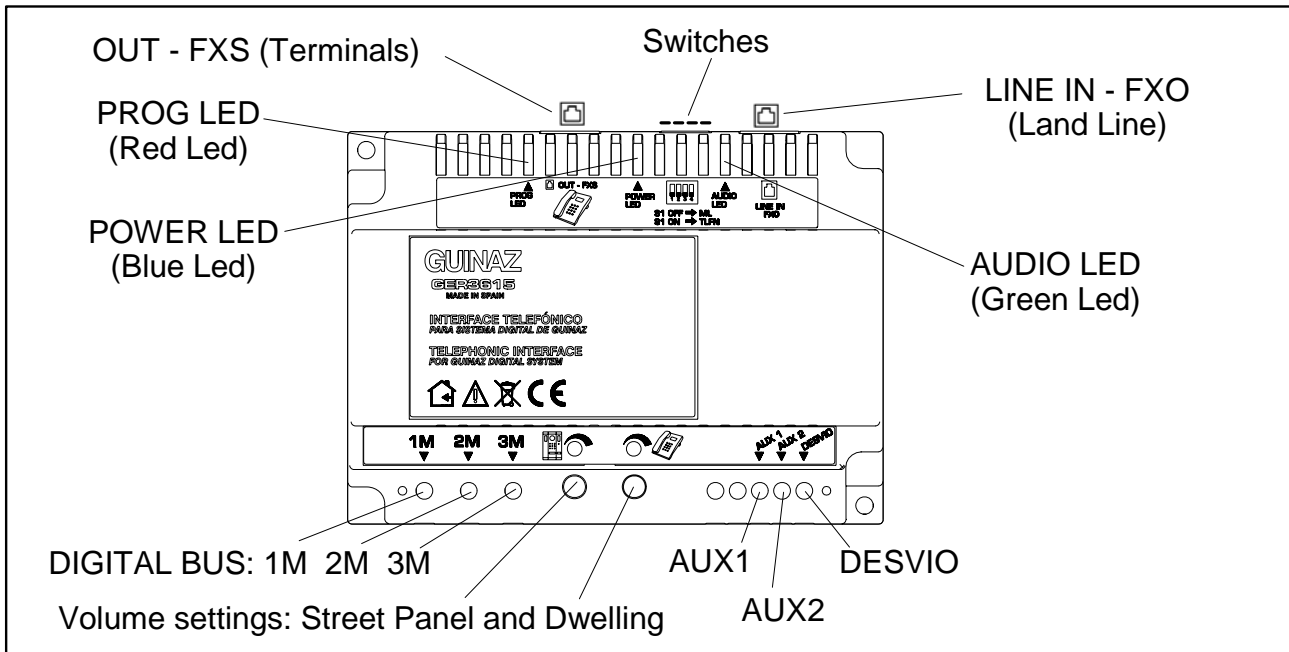
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1. INTRODUCTION.

The Digital Telephone Interface is a device designed for use in GUINAZ intercom/video intercom DIGITAL systems. This device integrates the intercom functions with TELEPHONE line functions, making it possible to answer a call on the intercom with an ordinary telephone and also to forward any intercom call to a fixed or mobile telephone, through the line provided by the user's telephone service provider. The land line provided by the telephone service provider must have an analogue input or provide such an input through an adapter

The device's functions are:

- To answer calls from the street intercom with the household telephone system, making it possible to speak through the intercom and open the door. A call from the street can also be answered via the monitors and/or handsets that are part of the GUINAZ digital intercom, if this is installed in the household, for which reason the GUINAZ terminals and the GUINAZ telephone interface must be configured to designate the principal and supplementary terminals and obviously, to have the same household code. When both systems are present and the GUINAZ digital intercom is connected (via the Digital Telephone Interface) to the household telephone system, the call rings on all the handsets and the intercom is answered by the first to pick up, leaving the rest OCCUPIED. The household telephone terminals must be touch-tone (DTMF) in order to enter user commands such as, for example, opening the door.

- To forward a call from the street intercom to an exterior telephone (a remote terminal) through the land-line (basic analogue telephone network), making it possible to speak to and open the door from said remote terminal. The Telephone Interface can function in different MODES, which set the moment for call forwarding to intervene, when the audio is connected to the calling street intercom panel, and whether or not the local terminals ring whilst the call is forwarded. Remote terminals must feature DTMF touch-tones in order to process commands such as opening the door.

- To enable audio vigilance and door opening functions from the household telephone terminals.

- To make it possible to call reception from household telephone terminals and vice-versa, to answer calls from reception with household telephones as well as the monitors and telephones of the GUINAZ digital intercom system, if this is installed in the household.

- To activate external elements via 2 auxiliary outputs.

- To enable or deactivate the call forwarding option through an external switch.

- To enable programming of all the device parameters, including the household number, whether a terminal is supplementary or not, the duration of the auxiliary output signal, call forwarding, etc. from the household telephone terminals.

- This device does not interfere with the typical services associated with the telephone line, such as incoming caller id.

- The device shows the origin of the call on the electronic intercom on the household telephone terminals, with the number of the street intercom panel, indicating whether it is the primary, secondary or exterior intercom or reception. In order to do this the household telephone terminals must have a screen that can display alphanumeric characters.

- The device can display the programming parameters of the household telephone terminals provided they have a screen and can display alphanumeric characters. See section *4.9 To display the device configuration*.

- The device is capable of extending the "normal" times for calls and conversation on the GUINAZ digital system, which are fixed for the street intercoms. This function can be enabled or deactivated during configuration.

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2. DESCRIPTION OF THE DIGITAL TELEPHONE INTERFACE.

2.1 Parts of the Digital Telephone Interface.

DIGITAL BUS: Typical 1M, 2M and 3M connections of the GUINAZ digital bus port.

OUT - FXS (terminals): Connector for telephone terminals. Several telephone terminals can be connected in parallel, although it is not recommended to connect more than 4 terminals to a single land line. The terminals should be touch-tone and should have an LCD screen that displays alphanumeric characters in order to display incoming calls. For parallel connections use of telephone adapters is recommended..

LINE IN - FXO (land line): Telephone connector for the analogue line contracted with the local telephone service provider.

Switches (audio SWITCH for hands free sets or telephone handsets): There are four switches available for different uses. Switches 2, 3 and 4 should be in the OFF position. Switch 1 indicates the kind of audio system the Guinaz intercom or video intercom is using to the Digital Telephone Interface:

- **SWITCH 1 OFF:** for GUINAZ **HANDS FREE** DIGITAL intercom systems.
- **SWITCH 1 ON:** for GUINAZ DIGITAL **TELEPHONE** intercom systems

Green LED; indicates the following events:

- A blinking light indicates that the telephone interface is calling the terminal or terminals connected to the FXS, this applies for any kind of call; from a land line (connected by FXO) or the DIGITAL BUS via M3 (from an intercom or the reception).
- It is continuously lit when a call has been connected between the digital bus (with an intercom or the reception) and a terminal connected to the FXS.

Red LED; indicates the following events:

- It is continuously lit when it is in programming mode
- Switches on when it detects that keys are being pressed on an engaged terminal connected to the FXS.
- Switches on for each number entered when forwarding a call.
- Switches on when information is sent to a terminal or terminals connected to the FXS; for example, to indicate the origin of a call from the DIGITAL BUS.

Blue LED (POWER LED): Indicates that the interface is powered.

AUX1: Auxiliary output 1, used to activate external functions in the intercom system. The interface runs a 15Vdc ± 1Vdc and up to 100mA signal through M2 (Guinaz intercom system mass), for a period that can be programmed in the device configuration. This signal is activated from the FXS terminals and also via any telephone that has been called by the call forwarding function.

AUX2: Auxiliary output 2, like aux1 only with a maximum signal of 30A.

DESVIO: A terminal that provides an input to the Digital Telephone Interface, making it possible to disable call forwarding via an external switch.

Volume settings: Potentiometers to adjust audio volume of conversations between the street intercom (or reception) and the household and remote telephone terminals connected via the Digital Telephone Interface. There are two potentiometers, one for the audio volume of the Street Intercom Panel, the other for the audio volume of the household and/or remote telephone terminals.

2.2 Specifications for the Land Line.

The land line needed to use the Digital Telephone Interface must provide a typical ANALOGUE input. Any input that can be used with an analogue telephone terminal is compatible with the Digital Telephone Interface. The Digital Telephone Interface cannot be connected directly to DIGITAL RDSI-type networks or local networks (IP telephone networks).

For example, the line provided by TELEFONICA ESPAÑA, described as an "access to the Public Telephone Network with Switching provided by Telefónica de España S.A.U for a basic user analogue line" is valid.

CABLE operators, such as ONO, also offer telephone services and the adapters they provide for analogue telephone inputs to connect their line to telephone terminals are completely valid for use with the Digital Telephone Interface.

2.3 Types of compatible telephone terminals.

TYPES OF TERMINAL DIGITAL TELEPHONE INTERFACE GUINAZ

TERMINAL NOT VALID — Terminal analog dial steps (wheel); Terminal for IP Telephony (VOIP); Terminal for digital telephony (RDSI)

VALID TERMINAL — DTMF analogue terminals
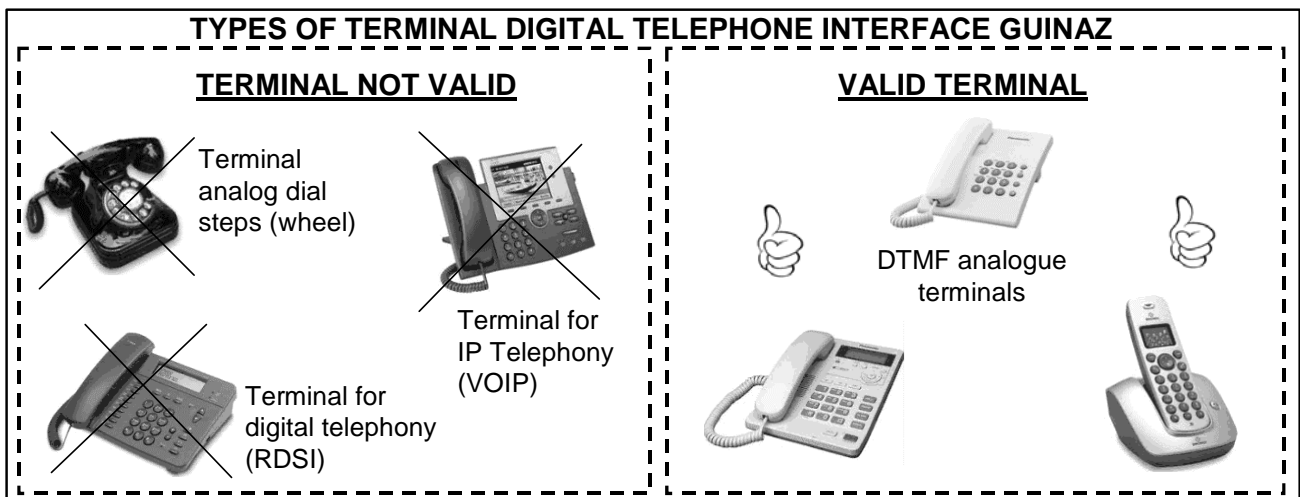
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3. INSTALLATION.

3.1 Installation with the GUINAZ digital intercom system.

The intercom function of the Digital Telephone Interface is very similar to the MONITOR and TELEPHONE devices in the GUINAZ digital system.

Installation of telephone interface in digital intercom system GUINAZ.
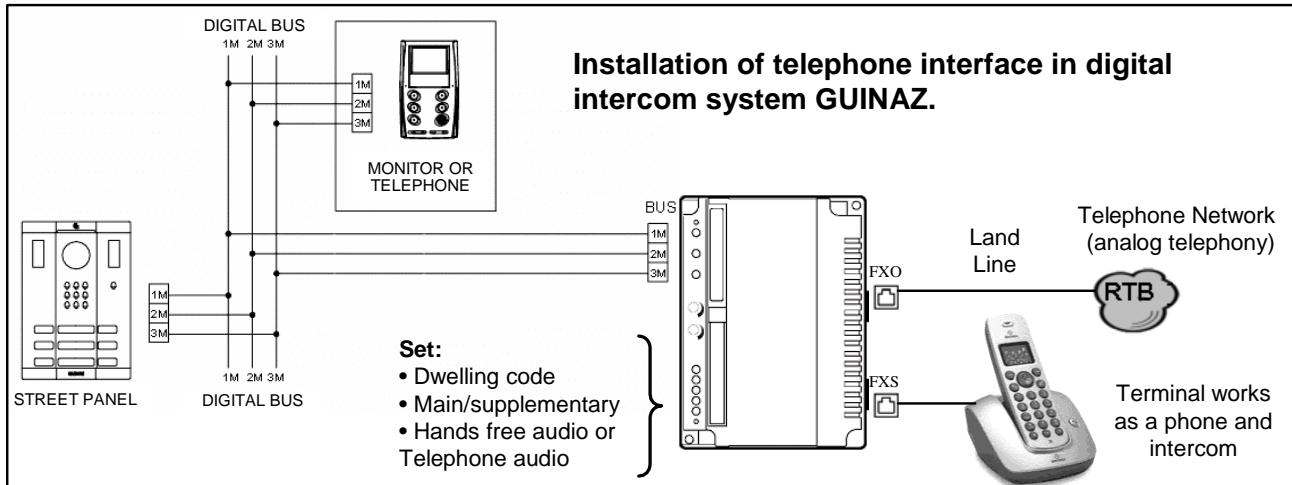
Like the MONITORS and TELEPHONES in the GUINAZ Digital Systems, it is necessary to configure the household number and indicate whether it is the main or supplementary terminal. If GUINAZ MONITORS and/or TELEPHONES in the GUINAZ digital system are present in addition to the Digital Telephone Interface, these must all be configured with the same household number. Furthermore, one and only one of the GUINAZ terminals or the GUINAZ Telephone Interface must be set in the configuration as being the principal terminal and the others must be set as supplementary.

In cases where both GUINAZ intercom and household telephone terminals connected to the Digital Interface are present, calls made from the street intercom or reception ring on all terminals and the connection is made with the first to be picked up, changing the status of the rest to OCCUPIED.

IMPORTANT: It is necessary to configure the Digital Telephone Interface to adapt it to the audio system of the intercom installed, which might be HANDS FREE or TELEPHONE based. SWITCH 1 on the Digital Telephone Interface is used for this purpose.

- **SWITCH 1 in OFF position**: for GUINAZ DIGITAL **HANDS FREE** intercom systems.
- **SWITCH 1 in ON position**: for GUINAZ DIGITAL **TELEPHONE** intercom systems.

3.2 Installation of auxiliary outputs.

The Digital Telephone Interface has 2 auxiliary outputs which activate external elements in the intercom installation, called Aux1 and Aux2. The Interface sends a 15Vdc ± 1Vdc, up to 100mA signal from Aux1, through M2, for a period that can be programmed (see section *5.6 Example: Programming duration of signal through auxiliary outputs*). This signal is activated by the terminals' connected to the FXS and also through any telephone that has been called by the call-forwarding function. Aux2 sends the same signal as Aux1 but only provides a current of up to a maximum of 30mA.

Installing auxiliary outputs of digital phone interface GUINAZ.
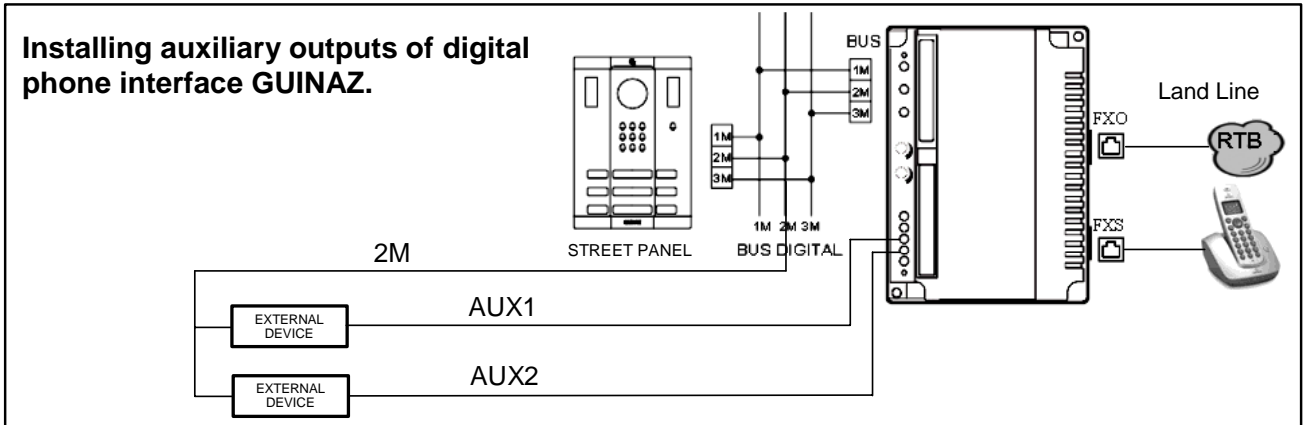
3.3 Installation of a switch to deactivate the call-forwarding function.

The Digital Telephone Interface makes it possible to activate and deactivate the call-forwarding option via a an external switch. If a continuous signal of between 5Vdc and 17Vdc (for example, connected to a switch at 1M) is sent through the "forwarding" terminal, the Digital Telephone Interface deactivates the call-forwarding function.

Installing a switch to disable call forwarding function.
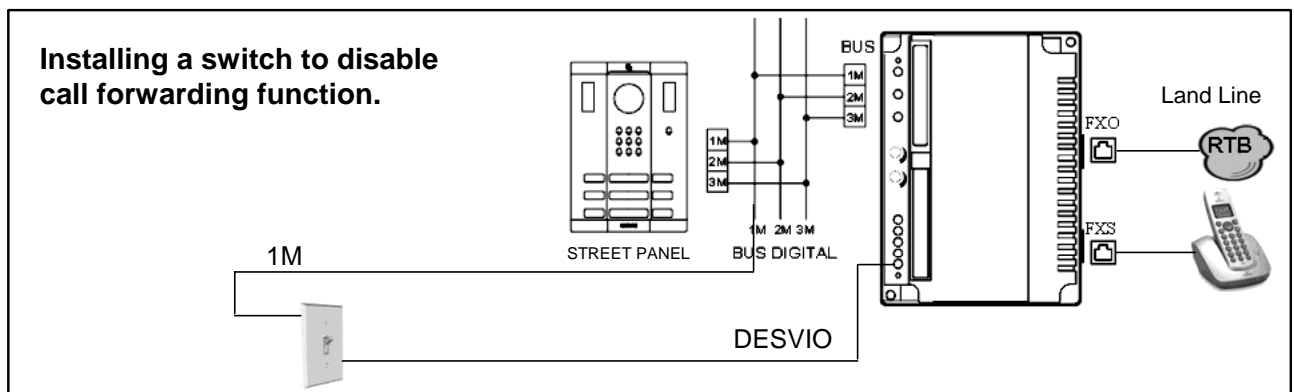
3.4 Setting up all telephone terminals for both telephone and intercom functions.

Installation with all telephone sets, telephone with intercom function.

Terminals that function as a telephone and intercom.

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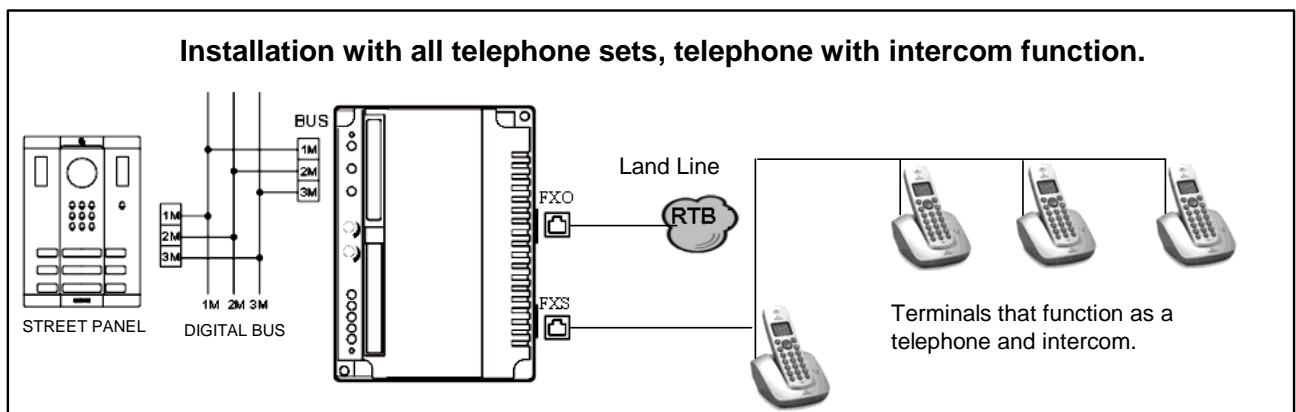
3.5 Setting up some telephones for just telephone functions and others for intercom and telephone functions.

Installation of telephone terminals only as phone and other as intercom and telephone.

3.6 If ADSL is present

Installation of Digital Telephone Interface GUINAZ compatible with ADSL.
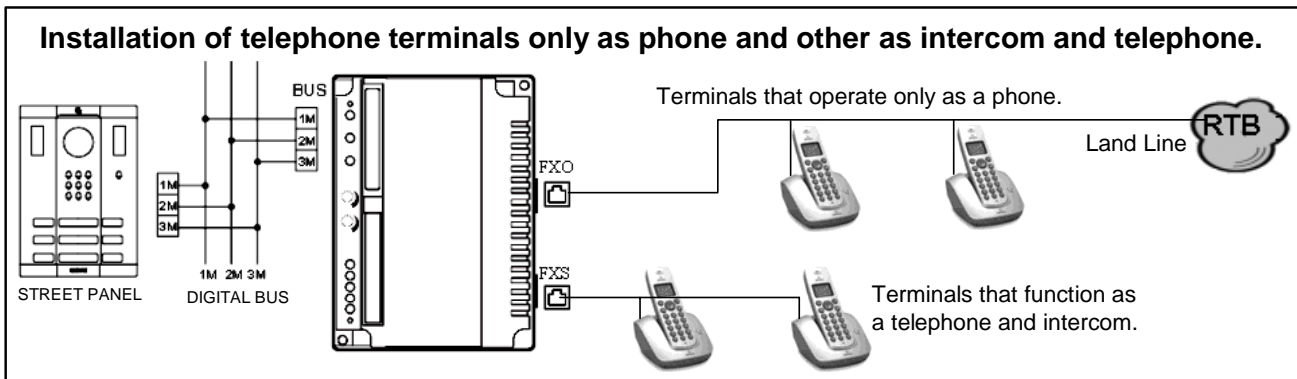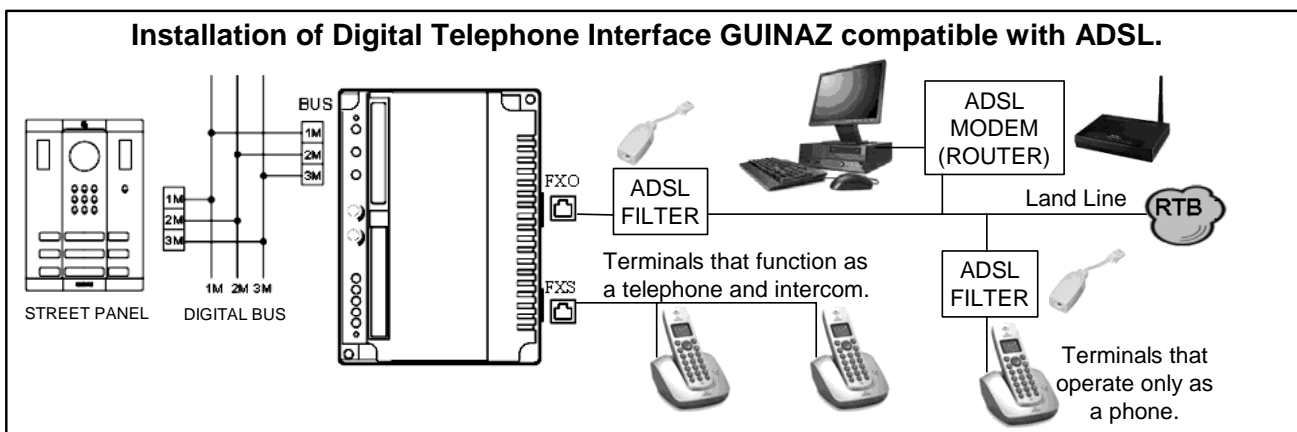
4. OPERATION.

4.1 A call from the intercom to the household telephones.

If a call comes from the intercom and the household telephones are free, these begin to ring with the normal tone, which can be modified to differentiate this kind of call from an external telephone call (TONE parameter, see section *5.13 Example: Programming the CADENCE of the RING tone for an incoming call*). The ringing lasts until a household telephone terminal is answered up to a maximum of 30 seconds, as indicated by the CALL TIME on the street intercom panel. If the user wants the terminals to ring for less time, the can shorten the ringing period by changing the RING duration parameters (see section *5.12 Example: Programming the length of RING time*), however the call can still be answered during the CALL TIME.

The CALL TIME is fixed for the street intercom panel on the GUINAZ digital system, but can be lengthened for 30 seconds more via the Digital Telephone Interface. This function is activated by default but can be deactivated, see section *5.10 Example: Deactivating the call and conversation extension*.

A call from the street intercom panel can also be answered via the monitors and/or telephones which are part of the GUINAZ digital intercom system, if installed in the household. In cases where terminals from both the GUINAZ digital intercom system and the household telephone system connected to the Digital Telephone Interface are present, the call rings on all terminals and the intercom is answered by the first to be answered, leaving the rest displaying OCCUPIED.

If the telephone terminal has a screen (normally used to identify the number of an incoming call) it will be able to display the origin of the intercom call such as the number and kind of intercom panel, indicating whether it is from an interior or exterior panel, or whether the call is actually coming from reception.

EXAMPLE	DESCRIPTION
— P O R T . P P 2	Call from principal interior panel, Nº 2
— P O R T . P S 7	Call from secondary interior panel Nº 7
— P O R T . P E 1	Call from principal exterior panel Nº 1
— P O R T . IR 1	Call from interior reception Nº 1
— P O R T . ER 6	Call from exterior reception Nº 6

When the telephone terminal is answered, audio communication is established with the street intercom panel. The conversation lasts until the terminal is put down or 60 seconds have passed since it was answered (CONVERSATION TIME), when the street intercom ends the conversation.

The CONVERSATION TIME is fixed by the street panel of the GUINAZ digital intercom system, but can be lengthened by 60 seconds via the Digital Telephone Interface. This function is activated by default, but can be deactivated, see 5.10 Example: Deactivating the extension of call and conversation.

Several functions can be executed during the conversation time:

- **Open the door** connected to the calling street panel. To do so, press * **5** (ASTERISK 5) on the telephone terminal.

- **Activate Auxiliary output 1.** To do so, press * **6** (ASTERISK 6) on the telephone terminal. The output lasts for 5 seconds, but can be modified by the user (see section *5.6 Example: Programming the duration time of auxiliary outputs.)*

- **Activate Auxiliary output 2.** To do so press * **7** (ASTERISK 7) on the telephone terminal. the output activates for 5 seconds but this can be modified by the user (see section *5.6 Example: Programming the duration of auxiliary outputs.*)

- **The call can be ended** without hanging up the receiver. To do so press * **8** (ASTERISK 8) on the telephone terminal. When the call is ended the terminal switches back to telephone line operations and the dialing tone can be heard to indicate an active line.

If the telephone terminal is off the hook when a call is made from the street intercom panel, for example if a telephone conversation is already in progress, an advisory tone sounds for the duration of the CALL TIME (30 seconds plus an extra 30 seconds if the call and conversation extension is activated). The user can answer the intercom call in two ways:

- Hanging up the receiver and so ending the telephone conversation. At this moment the terminal will then ring with the call from the intercom and if the user picks up the receiver again an audio connection will be established with the intercom panel in the street.

- It is possible to answer a call from the intercom without needing to hang up the household telephone, so keeping the telephone call open to renew it afterward. To do so press * **2** (ASTERISK 2) on the telephone terminal. At this moment an audio connection is established with the street intercom panel. The telephone call is retained but cannot hear the audio exchange with the intercom. Users can activate the door opening function and the auxiliary outputs whilst they remain in communication with the intercom. They can then return to the telephone call by pressing * **1** (ASTERISK 1).

4.2 Incoming External Telephone Calls.

The Digital Telephone Interface does not interfere with the normal functioning of external telephone calls, the phones ring when a call is received, the number of incoming calls is displayed and picking up a terminal receiver establishes communication with the caller.

If an external telephone call comes in whilst communication is ongoing with the intercom, a tone sounds for the time that the call is connected. Users can answer the telephone call in two ways:

- They can hang up the terminal, ending the connection with the intercom. At this moment the terminal will then ring to indicate that an external call is being received and an audio connection is established between the user and the external line.

- An external telephone call can be answered without needing to hang up the telephone terminal. To do so, press *** 8** (ASTERISK 8) on the telephone terminal. At this moment the connection with the intercom is interrupted and an audio connection is established between the user and the external telephone line.

4.3 The Call-Forwarding Function.

The call-forwarding function allows calls from the intercom to be answered by any fixed or mobile telephone connected to a telephone service. To activate it, users must program the number they wish the intercom call to be forwarded to (see section *5.5 Example: Programming the call-forwarding number*).

To disable the call forwarding number see section *5.8 Example: Programming the deactivation of call-forwarding.* To activate the function again see section *5.7 Example: Programming the activation of call-forwarding.*

The Digital Telephone Interface has several different ways of showing that the call-forwarding function is activated:

- If call-forwarding is activated, each time a telephone terminal is picked up a tone is generated on that terminal.

- If call-forwarding is activated each time a telephone terminal is picked up a green LED flashes on the telephone interface.

- If the telephone terminal has a screen and can display alphanumeric characters, the screen will indicate if the call-forwarding function is activated or not, as well as the programmed number to which calls will be forwarded. See section *4.9 Device configuration display.*

Furthermore, if the call forwarding activation/deactivation external switch has been installed, users can make use of this switch.

If the function is activated (by programming and the external switch) and the number programmed is valid, when a call comes from the street intercom, the forwarding number is dialed and the remote user has approximately **30 seconds** to answer (CALL TIME).

The CALL TIME is fixed by the GUINAZ street digital intercom panel, but can be extended by 30 seconds via the Digital Telephone Interface. This function is activated by default but can be deactivated (see section *5.10 Example: Programming to deactivate the call and conversation extension*).

When the user of the remote telephone answers, an audio connection is established with the street intercom panel. During the conversation, the user can execute several functions from the remote terminal:

- **Open the door** operated by the panel from which the call is being made. To so, press *** 5** (ASTERISK 5) on the remote terminal.

- **Activate Auxiliary Output 1**. To do so press *** 6** (ASTERISK 6) on the remote telephone terminal. The output activates for 5 seconds but this can be modified in the programming. See section *5.6 Example: programming the duration of auxiliary output signal*.

- **Activate Auxiliary Output 2**. To do so press *** 7** (ASTERISK 7) on the telephone terminal. The output activates for 5 seconds but this can be modified by programming. See section *5.6 Example: Programming the duration of the auxiliary outputs*.

Communication between the street intercom panel and the remote telephone will last a maximum of **60 seconds** from the moment the remote telephone is answered (CONVERSATION TIME).

CONVERSATION TIME is fixed by the GUINAZ street intercom panel system, but can be extended for 60 seconds more by the Digital Telephone Interface. This function is activated by default but can be deactivated (see section *5.10 Example: Deactivating the call and conversation extension*).

If they wish, the remote terminal user can finish the communication before the CONVERSATION TIME is up in two ways:

- Hang up the remote terminal.

- Press *** 8** (ASTERISK 8) on the remote terminal before hanging up.

It is possible that for particular reasons the telephone service provider will not detect when the remote terminal has hung up. In these cases, once the remote terminal has been hung up, the typical dialing tone will be heard on the street intercom panel until the CONVERSATION TIME (60 seconds plus 60 seconds more if the call and conversation extension is activated) has passed. To avoid this, the communication can be ended cleanly by pressing *** 8** (ASTERISK 8) on the telephone terminal before hanging up.

It is possible that whilst the street intercom panel is in communication with the remote telephone terminal, a local telephone terminal is picked up. In this case a special tone is generated on the local telephone terminal to indicate the situation. If the user of the local telephone terminal wants to answer the call from the street intercom panel, ending the remote communication, they should press *** 4** (ASTERISK 4) on the local telephone terminal.

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4.4 Call-forwarding Operation Modes.

The Digital Telephone Interface makes it possible for users to choose different modes for the call-forwarding function. The device will behave according to the MODE parameter that has been programmed. The following table contains a brief description of each operational mode.

MODE 0	• A call from the intercom causes all terminals (telephone and intercom) to ring. • All terminals can answer the call until a terminal is picked up. Until then all local terminals will continue to ring. • The Interface establishes an audio communication with the intercom panel (or reception) on detecting that the telephone (local or remote) has been picked up.
MODE 1	• A call from the intercom causes all terminals (telephone and intercom) to ring. • The Interface establishes an audio connection with the panel (or reception) after dialing the call-forwarding number. The calling tones can be heard through the panel.
MODE 2	• Local telephone terminals do not ring on receiving a call from the intercom (the intercom terminals do ring) and the call is forwarded immediately. • The Interface establishes an audio communication with the panel (or reception) on detecting that the telephone (local or remote) has been answered.
MODE 3	• The local telephone terminals do not ring when a call comes in from the intercom (the intercom terminals do ring), and the call is forwarded immediately. • The Interface establishes an audio communication with the intercom panel (or reception) after dialing the number to which calls should be forwarded. The dialing and ringing tones can be heard through the intercom panel.

The default mode is MODE 0. To change the programmed mode, see section *5.4 Example: Programming the Call-forwarding operation MODE*. The following explains each functioning MODE in depth.

4.4.1 Detailed sequence after receiving a call from the intercom in MODE 0.

A. When a call is received from the street intercom panel or reception, the Digital Telephone Interface makes the telephone terminals to which it is connected ring twice, as well displaying the origin of the call on the telephone terminals screens (if they have one).

B. Simultaneously, if there are monitors and/or telephones for the intercom system in the household, these will ring with their usual tone for the usual length of time.

C. Once the second ring has sounded, the Telephone Interface begins to dial the call-forwarding number.

D. The call can still be answered from the household intercom monitors and/or telephones and the telephones connected to the Digital Telephone Interface until the remote telephone is answered.

E. The household telephone terminals connected to the Digital Telephone Interface will carry on ringing with a different ring tone to indicate that the call is being forwarded.

F. When the remote terminal is answered, audio communication is established with the street intercom panel (or reception), making it impossible to answer the call from the monitors and/or telephones in the household intercom system as they change their status to OCCUPIED. Household telephone terminals connected to the Digital Telephone Interface stop ringing but can recover the call from the intercom by picking up (the busy tone is heard) and pressing * **4** (ASTERISK 4).

G. It is possible that for particular reasons the telephone service provider may not immediately detect that the remote terminal to which the call was forwarded has answered, in which case the first words from the remote terminal may be lost. In this case it is recommended to opt for MODE 1 or MODE 3.

4.4.2 Detailed sequence after receiving a call from the intercom in MODE 1.

A. When a call comes in from a street intercom panel or the reception, the Digital Telephone Interface makes connected telephone terminals ring twice also indicating the origin of the call on the telephone terminals screens (if present).

B. Simultaneously, if the household has intercom monitors and/or telephones these will ring with the usual tone for the normal length of time.

C. After the second ring, the Telephone Interface device will being to dial the call-forwarding number.

D. Once the call-forwarding number has been dialed, a connection is established with the street intercom panel, making it impossible to answer from the intercom system's monitors and/or telephones, which change their status to OCCUPIED. The household telephone terminals connected to the Digital Telephone Interface stop ringing, but can recover the call from the intercom by picking up the receiver (the busy tone will be heard) and pressing * **4** (ASTERISK 4).

E. The street intercom panel will play the ringing tone of the call being forwarded through the remote terminal.

F. The user of the remote terminal has the option of answering or not. If they answer, as the audio communication with the Telephone Interface and the street panel (or reception) has already been established, they can speak immediately.

4.4.3 Detailed sequence after receiving a call from the intercom in MODE 2.

A. When a call comes in from a street panel or reception, the Digital Telephone Interface begins to dial the call forwarding telephone number.

B. Telephone terminals connected to the Digital Telephone Interface do not ring or indicate the origin of the call on the terminal screens (if present).

C. Telephone terminals connected to the Digital Telephone Interface do not ring or indicate the origin of the call on the terminal screens (if present).

D. When the remote terminal is answered audio communication is established with the street intercom panel (or reception), making it impossible to answer the call from the household intercom system's monitors and/or telephones, which change their status to OCCUPIED.

E. Household telephone terminals connected to the Digital Telephone Interface can answer the call from the intercom by lifting the receiver and pressing * **4** (ASTERISK 4).

F. It is possible that for particular reasons, the line service provider will not detect that the remote terminal has answered the call immediately, leading to the loss of the first of the remote terminal user's words. In this case it is recommended to opt for MODE 1 or MODE 3.

4.4.4 Detailed sequence after receiving a call from the intercom in MODE 3.

A. When a call is placed from an intercom street panel or the reception, the Digital Telephone Interface begins to dial the call-forwarding telephone number.

B. The telephone terminals connected to the Digital Telephone Interface do not ring nor is the origin of the call indicated on the terminal screens (if present).

C. If the household has intercom monitors and/or telephones, these will ring with the normal ring tone for the normal length of time, but only until the Digital Telephone Interface has finished dialing the call-forwarding number. At this time an audio connection is established with the street intercom panel, making it impossible to answer the call from the household intercom system's monitors and/or telephones which change their status to OCCUPIED.

D. The household telephone terminals connected to the Digital Telephone Interface will allow the call to be answered by lifting the receiver and pressing * **4** (ASTERISK 4).

E. The intercom street panel will play the ring tones of the call forwarded to the remote terminal.

F. The remote terminal user will have the option of answering or not. If they answer, as the audio connection has already been established between the Telephone Interface and the street intercom panel (or reception) they will be able to speak immediately.

4.5 Audio vigilance function.

The Digital Telephone Interface allows the user to carry out audio vigilance through the street intercom panel. To do so, they must lift a receiver on a telephone terminal and press ** (two Asterisks). A beep will sound in the earpiece to indicate that it is in user mode and the dialing tone will cease to be heard. The user should then press * **4** (ASTERISK 4) to make the Digital Telephone Interface establish an audio connection with the street intercom panel to carry out audio vigilance. If the system is OCCUPIED a similar tone to the busy signal will sound to indicate that a communication is in process.

Once in audio vigilance mode, the user can open the door connected to the intercom panel by pressing * **5** (ASTERISK 5).

4.6 Activation of auxiliary outputs.

The Digital Telephone Interface has 2 auxiliary outputs (AUX1 and AUX2), used to activate external elements. For specifications and installation instructions, see section *3.2 Installation of auxiliary outputs*.

The outputs are activated for 5 seconds by default but said duration can be modified in the programming. See section *5.6 Example: Programming the duration of the auxiliary output signals*.

The outputs are activated in the following situations and circumstances:

- **If there is an audio connection between a telephone terminal and a street intercom panel**, auxiliary output 1 (AUX1) can be activated by pressing * **6** (ASTERISK 6) and auxiliary output 2 (AUX2) can be activated by pressing * **7** (ASTERISK 7) on the telephone terminal. For more information see section *4.1 Call from the intercom to household telephones*.

- **If there is an audio connection between a remote telephone and a street intercom panel**, auxiliary output 1 can be activated by pressing * **6** (ASTERISK 6) or for auxiliary output 2, * **7** (ASTERISK 7) on the remote telephone terminal. See section *4.3: Call-forwarding function*.

- **If users wish to activate the auxiliary outputs when the system is not in use**, they should lift a receiver on a telephone terminal and press ** (two Asterisks) in sequence. A beep will sound to indicate that user mode has been engaged, and the dialing tone will cease to be heard. At this moment it is possible to activate auxiliary output 1 (AUX1) by pressing * **6** (ASTERISK 6) or activate auxiliary output 2 (AUX2) by pressing * **7** (ASTERISK 7) on the telephone terminal.

4.7 The Call RECEPTION Function.

The Digital Telephone Interface makes it possible to make calls to RECEPTION. To do so lift a telephone terminal receiver and press ** (two asterisks) in sequence. A beep will sound to indicate that user mode has been engaged and the dialing tone will cease to be heard. At this moment the user should press *** 3** (ASTERISK 3).

If the system is not occupied, the call to reception will proceed as occurs in the GUINAZ digital intercom system. If the system is OCCUPIED a tone similar to the busy signal will be heard to indicate that the system in in use.

4.8 Volume adjustment.

It is possible to adjust the volume of the audio of the street intercom panel and the household and remote telephone terminals by adjusting the volume dials contained in the Digital Telephone Interface using a flat-head screwdriver.

4.9 To Display the Device Configuration.

In order to see the device configuration, lift the receiver of a telephone terminal, press the hash key four times (# # # #) and replace the receiver. The Telephone Interface will send the programming data entered step by step, each step being separated by short beeps. The sequence is as follows:

   A. Household number and whether the terminal is principal or supplementary

   B. Answer detection mode

   C. AUX1 duration time

   D. AUX2 duration time

   E. Call-forwarding activated (ON) or deactivated (OFF)

   F. CALL-FORWARDING telephone number

The telephone terminal must have a SCREEN and be able to display Alphanumeric characters (some only display numeric characters).

4.10 User Mode Function Table

In user mode users have access to several different Digital Telephone Interface functions. User mode can be accessed in two ways:

   A. Lifting the receiver of a household telephone and pressing ** (Two asterisks) in sequence.

   B. Whilst a conversation is occurring between an electric intercom and household telephone or remote telephone to which a call has been forwarded, user mode is also engaged.

NUMBER ENTERED	FUNCTION ACTIVATED
* 3	Call to reception
* 4	To carry out audio vigilance
* 5	To open the door (if an audio connection with the street intercom panel is enabled)
* 6	To activate auxiliary output 1
* 7	To activate audio output 2
* 8	To end the connection with the electronic intercom

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The following table sums up the rest of the numbers that can be entered to activate "other functions" even when user mode is not engaged.

SEQUENCE ENTERED	FUNCTION ACTIVATED
*** 2**	To answer a call from the intercom in the middle of a telephone call, which will be put on hold.
*** 1**	To resume a conversation placed on hold to answer a call from the intercom.
*** 4**	When there is a conversation in progress between the intercom and a remote terminal, the intercom can be answered from a household terminal by lifting a receiver and pressing * 4.

5. PROGRAMMING

5.1 Configuration Parameters for the Telephone Interface.

The parameters that can be modified are summed up in the following table.

SEQUENCE ENTERED (DTMF)				Parameter	Number of Digits <NUM>	Value <NUM>	Fact. Setting Value
To enter programming mode	Parameter Num.	VALUE	Leaving programming mode				
# # #	0	<NUM>	#	**Household Number**. Value <NUM> is the household number for the GUINAZ digital protocol .	1 to 3 digits	1 to 255	0
# # #	1	<NUM>	#	**Supplementary or Principal** terminal. PRINCIPAL: If Value <NUM> is 0. SUPPLEMENTARY: If Value <NUM> is 1.	1 digit	0 or 1	0
# # #	2	<NUM>	#	**Operation MODES of Call-Forwarding** **MODE 0**: If Value <NUM> is 0. Connect audio to panel if remote terminal is answered. **MODE1**: If Value <NUM> is 1. Connects audio to panel immediately after dialing call forwarding number. **MODE2**: If Value <NUM> is 2. Connects audio to panel when it detects that the remote terminal has been answered, like mode 0, but forwards the call from the beginning and the household telephones do not ring. **MODE 3**: If Value <NUM> is 3. Connects audio to the panel immediately after dialing call-forwarding number, like mode 1, but forwards the call immediately and the telephone terminals in the household do not ring.	1 digit	0, 1, 2 or 3	0
# # #	3	<NUM>	#	Value <NUM> is the **Call-forwarding NUMBER** to be dialed when function is activated.	2 to 20 digits	1 to 9	Clear
# # #	4	<NUM>	#	**RING duration** in seconds for an intercom call. The RING also has a tone to be programmed in another field.	1 to 2 digits	1 to 60	30
# # #	5	<NUM>	#	**Duration** in seconds for **AUX 1** activation.	1 to 2 digits	1 to 60	5
# # #	6	<NUM>	#	**Duration** in **seconds** for **AUX 2** activation	1 to 2 dígitos	1 to 60	5
# # #	7	<NUM>	#	Activation of call-forwarding **Call-forwarding is deactivated** if Value <NUM> is 0. **Call-forwarding is activated** if Value <NUM> is 1	1 digit	0 or 1	0
# # #	8	<NUM>	#	Activation/deactivation of conversation/call extension. **Deactivate extension** if Value <NUM> is 0. **Activate extension** if Value <NUM> is 1.	1 digit	0 or 1	1
# # #	9	<NUM>	#	Value <NUM> is the **TONE** of the RING when a call is made from the intercom.	1 to 2 digits	5 to 15	5
# # #	*	1234	#	Sets all parameters to **Factory Settings.** **WARNING**: This wipes the Interface configuration. Do not input this sequence if you are not the installer.	4 digits	1234	Factory default
# # #			#	After inputting this sequence, when the terminal receiver is replaced, the interface displays the existing programming values step by step between very short beeps, which will only be visible in the telephone has a screen, can interpret CLIC protocol and can display alphanumeric numbers. The sequence is as follows: - Household number and whether it is a supplementary or principal terminal - Answer detection mode - AUX1 signal time - AUX2 signal time - Call-forwarding activated (ON) or deactivated (OFF) - Call-forwarding telephone number	0 digits	NONE	NONE

The configurable parameters for the Digital Telephone Interface can be modified in PROGRAMMING MODE. This can be accessed by pressing **# # #** in sequence once the receiver has been lifted on the terminal. When the mode is engaged a beep sounds in the earpiece and the red LED lights up and stays on until the programming of parameters has finished. This mode can only be accessed to program a single parameter at a time and when this is finished the terminal returns to normal telephone mode (the dial tone should be heard). Once in PROGRAMMING MODE, the first sequence entered selects the parameter to be modified and successive sequences adjust the required value of the parameter. To leave PROGRAMMING MODE and finish the modification of the parameter in question, press **#**.

5.2 Example: Programming the Household Number.

Steps to follow to configure the Interface as household No. 14.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the Household No. Parameter, pressing **0**.

D. Press **14**.

E. Leave programming mode by pressing **#**.

5.3 Example: Programming which system is supplementary or principal.

Steps to follow to configure the Digital Telephone Interface as supplementary.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the principal/supplementary parameter by pressing **1**.

D. As it is to be supplementary, press **1**.

E. Leave programming mode by pressing **#**.

5.4 Example: Programming the call-forwarding function MODE.

Steps to follow to set the Digital Telephone Interface to MODE 0.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Choose MODE parameter, pressing **2**.

D. Press **0** to choose MODE 0.

E. Leave programming mode by pressing **#**.

5.5 Example: Programming the call-forwarding number.

Steps to follow to configure the Digital Telephone Interface for a call-forwarding number of 900 100 200.

A. Lift the terminal receiver and wait for the tone.

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B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the call-forwarding number parameter by pressing **3**.

D. Enter the call forwarding number **9 0 0 1 0 0 2 0 0**.

E. Leave programming mode by pressing **#**.

Bear in mind that on configuring the call-forwarding number, the call-forwarding function is automatically activated.

5.6 Example: Programming the Duration of Auxiliary Outlet Signals

Steps to follow to configure the Digital Telephone Interface to send a 10 second signal duration through AUX1.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the parameter number for AUX1 duration, by pressing **5**.

D. For a ten second duration, enter **10**.

E. Leave programming mode by pressing **#**.

5.7 Example: Programming Activation of Call-forwarding.

Steps to follow to configure the Digital Telephone Interface for CALL-FORWARDING ACTIVATED.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Choose the parameter for activation/deactivation of call-forwarding, pressing **7**.

D. To activate, press **1**.

E. Leave programming mode by pressing **#**.

Bear in mind that call-forwarding will only be activated if a number for call-forwarding has been programmed and the external switch does not impede it.

5.8 Example: Programming to Deactivate Call-forwarding.

Steps to follow to configure the Digital Telephone Interface to DEACTIVATE CALL-FORWARDING.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the parameter for activation/deactivation of call-forwarding, pressing **7**.

D. To deactivate call-forwarding, press **0**.

E. Leave programming mode by pressing **#**.

5.9 Example: Programming to activate call and conversation extension.

Steps to follow to configure the Digital Telephone Interface to ACTIVATE CALL AND CONVERSATION EXTENSION.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the parameter for activation/deactivation of call and conversation extension by pressing **8**.

D. To activate the extension, press **1**.

E. Leave programming mode by pressing **#**.

Bear in mind that call-forwarding will only be activated if a number for call-forwarding has been programmed and the external switch does not impede it.

5.10 Example: Programming to deactivate call and conversation extension.

Steps to follow to configure the Digital Telephone Interface to DEACTIVATE CALL AND CONVERSATION EXTENSION.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the parameter for activation/deactivation of call and conversation extension by pressing **8**.

D. To deactivate the extension, press **0**.

E. Leave programming mode by pressing **#**.

5.11 Example: Programming to clear the configuration (return to factory settings).

Steps to follow to WIPE the whole configuration of the Digital Telephone Interface. The parameter values return to those set in the factory.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Choose the factory setting value by pressing *** 1 2 3 4** (ASTERISK, ONE, TWO, THREE, and FOUR).

D. Leave programming mode by pressing **#**.

5.12 Example: Programming the duration of the call RING tone.

Steps to follow to configure the Digital Telephone Interface for a RING of 10 seconds. This makes a call from the intercom panel last 10 seconds with normal tone intervals and silences, but the call can still be answered during the CALL TIME (30 seconds and 30 seconds extra if the call and conversation extension is activated), even though the terminal does not ring.

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Choose the parameter for RING duration by pressing **4**.

D. As the aim is to program a duration of 10 seconds, enter **10**.

E. Leave programming mode by pressing **#**.

5.13 Example: Programming the cadence of the RING tone.

The RING emitted by the household telephone terminal (or terminals) consists of three blocks of TONES, with a short interval of silence between them and a long silence after the third block. This pattern is repeated for as long as the call lasts. Each block of TONES is of a determined number of CADENCES. The CADENCE can be configured to sound between 5 and 15 consecutive TONES in each block, according to the user's wishes. The following shows how to configure the Digital Telephone Interface for 6 TONES per block:

A. Lift the terminal receiver and wait for the tone.

B. Access PROGRAMMING MODE by entering sequence **# # #** (3 Hashes). When this mode is entered a beep sounds in the ear-piece and the red LED switches on, staying lit.

C. Select the parameter for RING cadence by pressing **9**.

D. As a cadence of 6 is required, press **6**.

E. Leave programming mode by pressing **#**.

6. TECHNICAL SPECIFICATIONS.

Power supply to Digital Telephone Interface: +17VDC (1M cable from digital bus to intercom)

Consumption when not in use: < 120mA

Maximum consumption (household telephone terminal in use): < 190mA

Operation temperature: 0ºC to +60ºC

Range of Call-forwarding terminal input: 5 ÷ 17 VDC

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