# Tina 106

1 office line

# Tina 206

2 office lines

## TELEPHONE PRIVATE BRANCH EXCHANGE

6 extension stations

Tone in-dialing (DISA)

Pseudocharging is already part of the basic equipment

Automatic fax and modem switch

Charging and credits (pursueing and a possible reducing of telephone bills)

Built-in protection against voltage overshoots in the telephone line and in the mains and lots of other functions

Possible accessories:

Electronic doorguard (tablo)

Voice module, which announces the charge and credit situation

Module, with which you can pursue the operation on your PC, including a built-in memory (buffer) and comfortable software for MS Windows ®

BONNEL TECHNOLOGIE

Internet http://www.bonnel.cz

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# 1 Introduction

The aim of the development of the telephone branch office TINA 206 and TINA 106 (=PABX) was to get a modern telecommunication device which fulfils the exceptions posed in current times to a device of this category. The conditions were to have small costs of purchase, but not to shorten the number of advantageous functions, available in branch offices of a higher price-category.

There is a large scale of such functions, but they do not disadvise the user with a complex way of operation.

Big efforts have been made to make a high grade of technical reliability and a high safety of too high voltages in the telephone line and in the mains possible.

Especially in households, small offices or as an extension to existing larger branch offices TINA offers you services, you would not like to miss in modern and effective communication.

A serial built in extension possibility allows you to widen the functions by using a special module. It is insertable even by a layman.

Now, a voice module is available, which announces the state of charge and the credit account, and another module, that allows you to control the operations with confortable software under MS Windows 3.11/95/NT.

An electronic door-guard with two ringing-buttons, which can be connected with one of the extension station, allows you to ring up any telephones or groups.

There are also several new possibilities planned, for instance to control electrical consumers (as heatings, lights, other devices etc.) and telephonically question their condition.

Please inform yourself also on our Internet pages, where you, among others, have the possibility to download the latest software versions for our products, also testing versions of our software. Our Internet address is http://www.bonnel-tech.com, the e-mail address is bonnel@telecom.cz.

## 1.1 Your satisfaction is our wish

This operation manual will help you to take advantage of the great variety of useful functions of the TINA.

No matter if you use TINA private or in your business, please take enough time to study this manual, test each function without being afraid to damage or reprogram the device.

This way you open yourself a great spectrum of function, which can serve you in the daily use.

Every change can be easily reset. You will find further informations on page 🕮 46.

Basic operating instructions, for those who want to start immediately working with their new TINA, are on page 🕮 28.

Professional or less known expressions and the used pictograms are explained starting with page 🕮 15.

# 2 Safety instructions and warnings. Please read carefully !

## 2.1 Hints

The dealer and the producer are not responsible for indirect damages, which could arise by using this product. This is valid, unless there is not any responsibility regulated by the law.

## 2.2 Safety instructions

During the installation, use, cleaning and repair of this PABX it is important to follow all the instructions this manual contains. If you do not respect this, the producer will not be responsible for any causes, which might come up.

## 2.3 Protection against high voltages

The PABX is protected with a double isolation against high voltages (Only when the cover is closed).

During the use of the PABX there are high voltages at the output of the mainstransformer (this depends on the operation type), the clamps of the extension stations and the office line.

The PABX must be operated with the cover closed (that means the cover is fixed, so that it is only openable with a tool). Always pull out the plug before making modifications with the cover opened.

This PABX is only for indoor use under dry conditions.

## 2.4 Instructions for installation and repair

To link the PABX to the according socket use a connector type RJ11. Every user is allowed to make this installation.

Only connect the PABX with valid types of telephones/faxes/ modems.

Always pull out all plugs before removing the cover for installation.

To avoid damages because of electrostatic charges always ground yourself before touching the parts on the component board.

The supply is not equipped with a changeable fuse. In case of overload it is protected by a built in PTC.

Repairs may be done only by authorised personal. You are advised to have the device repaired by the producer. Any interferences during the warranty period finish the productors warranty obligation.

## 2.5 Maintenance and cleaning

During the operation the PABX does not need any controls or maintenance. The talks and the ringing are switched by modern electronic parts, which cannot be torn out. So oxidating and burning of any contacts (like in relays used in many other PABXs for this purpose) is not possible.

For cleaning simply wipe the surfaces of the device with a wet cloth (Use a mild washing lotion occasionally).

Water must not get into the PABX. Never use aggressive or oxidating washing lotions or dilutatives!

## 2.6 Materials used for packaging and their disposal

The productor is obliged by law to inform the customers about the packagings used and how to dispose them.

The packaging is made out of cardboard, containing a high level of recycled material. The best way to dispose it, is to throw him in the special waste paper bin.

The bag which avoids the TINA from scratchings and other damages is made out of polyethylen (PE). This material does not pollute the environment when stored in a dump or burned in a waste incineration.

This bag can be easily thrown in the normal waste bin.

Soon the PE-bag will be replaced by a extra-fine-paperbag, that can be disposed the same way as the packaging.

# 3 Quick overview

- One (TINA 106) or two (TINA 206) office lines.
- Six extension stations (ES) with impulse or tone dialing (possible to combinate at will).
- In case of a mains failure the extension station number 21 remains for external calls.
- Two (TINA 206) or one (TINA 106) external and two internal connections simultaneous possible.
- Internal conversations free of charge.
- Tapping an internal or external conversation is out of question.
- Several ringing-modes for internal and external connections.
- Tone in-dialing (DISA) to single ES or to the group of ES.
- Redirecting an external connection to any extension station without waiting for an internal connection with aimed, group general or group-aimed ringings.
- Questioning back - you are able to contact another internal extension station during an external call.
- Conference function between two internal and one external subscribers.
- Listen what is going on in a certain room, using an off-hooked handset. This function is protected by an access code.
- General group calls (all not occupied extension stations start to ring), or aimed group calls (only a certain number of programmed extension stations start to ring).
- Automatic recognising and linking of incoming faxes to pre-defined extension stations (other ES do not ring).
- Automatic recognising and linking of incoming modem connections to pre-defined extension stations (other ES do not ring).
- Direct access to the office line possible (programmable for each single ES).
- Possibility to take over an office line connection even at not ringing extension stations.
- Possibility to take over an office line connection from answering machine. In case of activated automatic fax switch from combinated devices (phone + fax + answering machine), too.
- Possibility to switch between DAY and NIGHT modes (regarding the external ES ringing connection and the office line access categorisation).
- Categorisation: Permanent blocking of local and non-local calls or/and calls to foreign countries. Moreover, a prohibition for a connection with one of two programmable plus code numbers. This categorisation is adjustable at will for every single ES (that means extension station mode also regarding DAY/NIGHT operation mode) or for the user (his restrictions are valid no matter from which station he is calling). Emergency calls are always possible from any extension stations, their order and ca-

tegorisation is not significant. The supported numbers are: 11x; 15x; 080x, where “x” is whatever set of numbers.

- Possibility to use the PABX in extension station mode or user mode regarding the access to the public telephone net, categorisation and charging.
- Temporary charging (also known as ‘pseudotarification’). This type of charging delivers you, after having set the time-units realistically, an amazingly exact result, comparing to the 16 kHz charging impulses. The time units are as long as the charging impulses are. It is possible to adjust those units for local, non-local calls and calls to foreign countries.
- Credits: Possibility to enter an account of available charging impulses (in minutes). This account will be deducted for the ES (extension station mode) or for the user (user mode). When the accounts are exhausted, the office line access is not possible any more from the ES or for the user (depending on the mode). Emergency calls are furthermore possible.
- Music on hold (music is in the background) when passing the conversation or questions back to another (possible to disconnect by programming).
- Enable or disable external calls to certain ES is programmable.
- Programmable delay for external ringings (0 to 9 intervals of ringing) for single extension stations. This function can be used as passive fax or modem switch.
- The function ‘Don’t disturb’ (=temporary impair for ringings) blocks external or all ringings from a single ES.
- Knocking — signalisation of an incoming external connection into a internal conversation (programmable for single ES).
- Interest about the office line — it is possible to call attention, that there is an interest during an external call.
- Return-ringing — after an not succeeded try to get a connection (because of the occupied office line) there is an ‘office line reservation’ possible. The ES, on which this reservation has been made gives a short ringing-signal, after the office line is available again.
- Modem connection transmission speed of 33,6 kBaud possible (depending on the transmission quality of the connection).
- Switching the internal tone dialings to impulse dialings to a general public telephone branch office (by using the office line).
- Built-in symmetric two stages protection against high voltages (e.g. caused by lightnings) and quick semiconductor elements against high voltages in the telephone net.

Accessories:

- Electronic door-guard, with automatic loudness-control and two buttons for aimed ringings to any ES or any group of ES (easily programmable by telephone).
- Speaking module MS206. You are able to record numbers from zero to nine plus a introduction message, appearing when tone in-dialing DISA is used. Using this numbers the module can transmit you charge- and credit counter contents. You can

question them from any telephone. The introduction message informs the user about the possibility to make an in-dialing.

- Module with memory to pursue, control and program the operation of MEH 206. The module pursues and stores information about the operation of the PABX (including real-time, there is a clock with calendar on the module). The module is equipped with a DC decoupled serial interface for PC.
- Including comfortable software for MS Windows® (version 3.11, 95 or NT), with which you are able to evaluate data and distance operating and programming the PABX (includes dialing from PC).

The best way to get used the wide possibilities of the module MEH 206, is to download the latest software for the charging module. Our Internet address is: http://www.bonnel-tech.com .

More information about the module you can find at 🕮 39.

# 4 Explanation of the technical terms

Office line

This very common term is not correct any more. It defines the connection to the telephone line (no matter which company is running it), from which you build up connections to other subscribers. If TINA is only used as secondary PABX, the ‘office’ line is now the connection of the other PABX, to which your TINA is linked.

Public telephone branch office

This term describes the device, which makes sure, that you get a connection with the subscriber you want. If TINA is only used as secondary PABX, the situation is similar like above with the office line.

Owner

The person(s), who are authorised to program the adjusting of the PABX. In this case owner do not need to means, that this person has actually bought the device.

User

User is the person, who has access to terminal equipment, and uses it (in extension station-mode), or the person, who knows at least one of the users’ identification numbers and is authorised to access the office line.

Owners’ identification number (OIN)

OIN is a four-figures-number, which makes possible the access to program the PABX. The default setting is 8888; if you change this number remember it very well. If you forget this number, it is not possible to program TINA any more or use the functions for which you need this number. A simple reset is not possible. For further information see 🕮 41.

Users’ identification number (UIN)

A four-figures-number, which makes possible the access the office line for the user (in user-mode). If the user forgets the number a reset is possible by the owner.

Going off-hook

This term is derived from the term ‘lifting the handset’. Telephones are usually equipped with a contact, which connects them to the office line after going off-hook. Now the office line is occupied by this telephone. Other terminal equipment like answering machines or fax can also go off-hook and occupy the line. Even TINA can go off-hook, if this is programmed (e.g. tone in-dialing DISA, or automatic fax-switch).

Flash

A short, defined interrupt of the feeding loop (80 - 1000 ms): This is information for TINA. Nearly all modern telephones, which are able to dial with tone-dialing, have a special button which generates this interrupt. This button has usually an R on it.

User-mode

A confined office line access is tied to the people who have an UIN (no matter from which ES the connection has been built). People with this UIN can only access terminal equipment. This user-mode offers a bigger overview, because the restrictions ‘wander

around' with the user. It makes also a clearer situation when counting down charging credits.

ES-mode

In this operation-mode all restriction stay tied to the single ES. The access to the office line is possible for everyone.

Impulse dialing

Impulse dialing is a type of number-signalisation, or taking over information by interrupting the feeding-loop in a predefined rhythm and number of interrupts. The number of interrupts is characteristic for each figure. The figure zero is characterised by ten interrupts. This way the dialled number is transmitted to the PABX (private or public).

Tone dialing

Tone dialing is a type of aimed signalisation by a predefined pair of tones (300 - 3400 Hz). This way the dialled number is transmitted to the PABX (private or public). A big advantage is, that other tones, that means information can be transmitted (e.g. useable for the tone in-dialing DISA, coded access, operation of other consumers, distance-questioning the answering machine…).

Charging

Pursuing and collecting charging impulses, sent by the public telephone branch office (16 kHz-impulses) with the possibility to get a overview about lines, ES and users. If these impulses are not available, the PABX can use pseudotarification (a type of charging impulses will be generated for different distance-belts, the time units have to be entered first). See "charging units" explanation below.

Charging units

This term has been introduced, because TINA is able to send pseudocharging, when charging impulses are not available. You can adjust your TINA either to count impulses, sent from the TELECOM, which have constant, predefined charges, or minutes, counted by the PABX, which charge depends on the distance, that means on the prefix plus code number. So an adjusted charging impulse can either be a real one, sent from the TELECOM, or a pseudocharging impulse. For further explanations see the according chapter.

The line charging counter

Counts the charging impulses, and is able to inform you (if you are equipped with the module MS 206 or MEH 206) about the state of the counter. Only the owner (explanation above) is able to reset this counter.

The PABX charging counter

Counts the charging impulses for a concrete ES, and is able to inform you (if you are equipped with the module MS 206 or MEH 206) about the state of the counter. Only the owner (explanation above) is able to reset this counter (in ES- and user-mode).

The users' credit counter

Counts the charging impulses for a concrete user, and is able to inform the user (if you are equipped with the module MS 206 or MEH 206) about the state of the counter. Only the owner (explanation above) is able to reset this counter.

ES charging credit

It is a credit account of available charging impulses for a concrete ES, with the possibility to count them down and the possibility to inform the owner (if you are equipped with the module MS 206 or MEH 206) about the state. The owner has also the possibility to fill these credits up (only in user mode with activated counting down of charging credits).

User charging credit

It is a credit account of available charging impulses for a concrete user, with the possibility to count them down and the possibility to inform the owner (if you are equipped with the module MS 206 or MEH 206) about the state. The owner has also the possibility to fill these credits up (only in user mode with activated counting down of charging credits).

AD1 and AD2

Short forms of ‘access dialing’, dialing to adjust the PABX. Further information, see chapter ‘Adjusting the ES-PABX’.

Tone in-dialing DISA

The calling subscriber has the possibility to dial directly to a single ES or to a group of ES. Further informations, see 📖 36.

# 5 Pictograms used


Telephone is ringing


Handset lifted


Handset on-hook


Conversation is lasting, handset is lifted


Dialing

Dialing the flash-button

Dialing the zero


Interrupted tone


Lasting tone


Page, referring to a determined page of this manual

# 6 Installation and getting started

All interventions on the device with the cover opened are only allowed when the office line(s) plug(s) and the mains plug are put out of the sockets!

Before opening the cover, remove all plugs from their sockets!

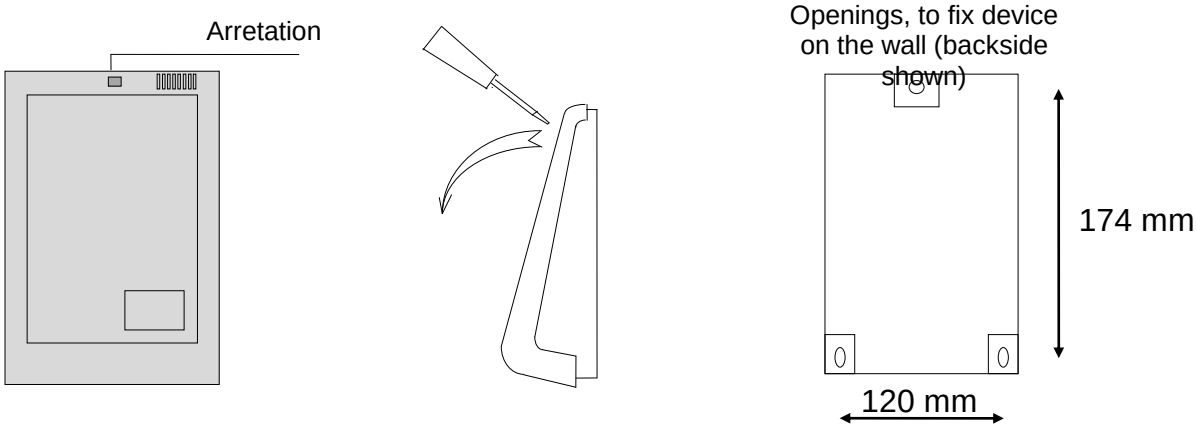
Make sure that the cover was closed again before putting the plugs into the sockets!

The PABX should be fixed near a telephone connection and a mains socket, it is also important that a good connection to the extension stations was made sure. The possibility to reach the PABX during its operation is not important; using a telephone can do all programming.

Do not install the PABX during a thunderstorm!

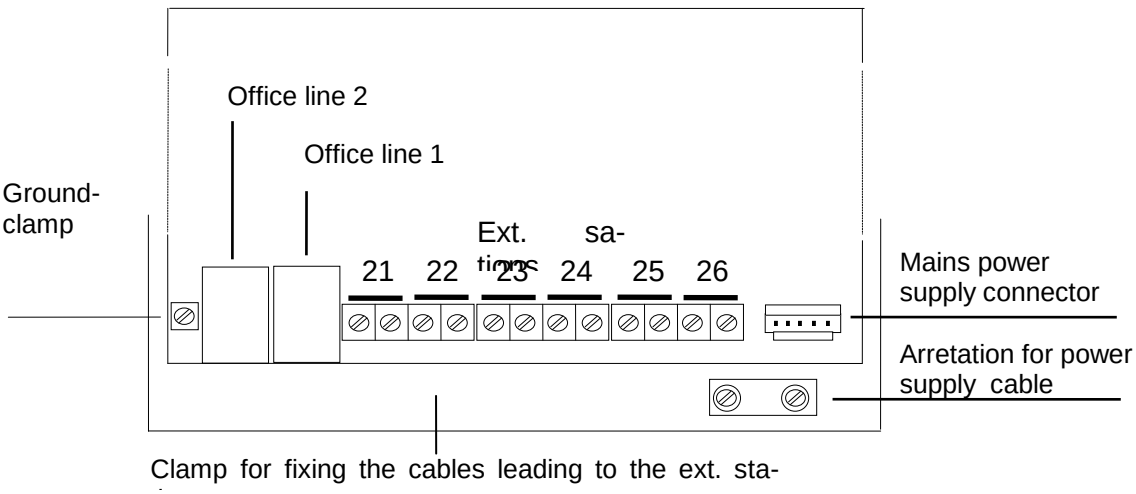
The power consumption is very small. Even during a intensive use it never increases over 6 Watts. That is one tenth of a normal light bulb.

The cover can be opened with a flat screwdriver. Put the screwdriver into the small opening in the upper side, and release the fixing by a careful move upside. Lift the cover up.




Fix the backside of the device on a solid and straight surface by using proper screws.

Be careful to not destroy any electronic components !



Telephone lines (one for TINA 106, two for TINA 206), for a connection to the office line are to be put into the PABX connectors.

Fix the mains power supply cable to the connector on the right, down side, and fasten it by using the fixing. Make sure that the conductors are not mechanically burdened.

Link the ground clamp with a good ground potential, for example water tubes.

Link the two conductor cables of the single ES to the screw-clamp. Crossed cables (changed polarity), are not critical. For more details see page 19.

Please close the cover, so that you can hear a ‘click’, when the mechanism snaps.

Connect the office line(s).

Insert the power supply device into a 230 V mains socket.

The installation is now finished. Now it is possible to check whether the PABX works properly. Please try to go off-hook with the ES (one after the other!). By doing that you should hear the PABX internal tone (a lasting tone). The next step to control the proper work goes with the operation by itself conform. It is possible to check the functions described starting 🕮 28.

## 6.1 Operating the branch office TINA 206 with only one office line

In case of operating TINA 206, meant for the use with two office lines, is operated with only one office line, it is possible to change the programming. Further information on 🕮 53.

The office line must be connected to the connector for office line number 1, see picture on 🕮 19, otherwise it is not possible to enter the office line.

## 6.2 Protection against high voltages, induced into the telephone line

Induced high voltages are mainly caused by lightnings, or are inducted in the telephone line by other cables with high current. Those high voltages last sometimes longer, than the protection systems on telecommunication device are built for.

It is the obligation of the enterprises, which run the telephone lines to protect the lines against high voltages. But actually their protections do not really work.

The PABX TINA is equipped with a highly effective symmetric protection against high voltages, which are inducted into the line. It contents a symmetric gas arrester as rough and three symmetric fast semiconductor components as very fast fine protection. The built in lightning protection is able to redirect a current up to 5,000 A. A special softener with a thick isolation separates the rough and the soft protection. This softener delays the impulse and gives the lightning protection enough time to react, so that a part of the current can flue there (this reduces the current flueing through the fine protection).

Therefore the ground clamp must be connected with ground-potential. Use a conductor with a cross-section of 2.5 - 4 mm2.

The proper work of this protection depends on a as small as possible impedance of the central protection spot, relating to the ground-potential.

Apart from that, the ES-lines are also protected against high voltages, but this protection is not dimensioned for situations, e.g. when the ES connections are lead outside the building. The mains power supply is equipped with an effective varistor, that, when necessary, cuts interfering pulses in the mains.

## 6.3 About lightning-damages warranty

Some customers ask why BONNEL TECHNOLOGIE does not give a warranty for damages caused by lightnings, like some other firms do.

Lightnings are a part of those phenomena, which cannot be seen before or planned; they are the so-called act of god. For such things a warranty cannot be given.

Another important factor is the condition of the telephone line. Although the enterprises which run these lines have to take care (that means use protections against high voltages etc.), the safety standard in the eastern part of Europe is not high enough.

So, a warranty (which is included in the price of the PABX) can be given only for a certain period of time (mainly six months). The producer is weighing up the possibility to give customers (at own wish only!) a special warranty.

# 7 Connecting participant terminal equipment

## 7.1 Generally

All terminal equipment with two-wire interface can be connected to the PABX. Every terminal equipment., that is thought to functionate in the office line, is also linkable to the TINA. If this terminal equipment has access to the office line, national authority must approve it.

### 7.1.1 Tone or impulse dialing

When possible, give modern devices with tone dialing (DTMF) precedence. You are advised to program you device, so that it works with tone dialing (only when the public telephone branch office gives you the possibility to do that. Most of the modern digital systems allow you this possibility.).

Tone dialing makes sure a fast connection, and if opposite side makes it possible, even DISA and other services.

The type of dialing used by the terminal equipment is automatically also used in direction to the public telephone branch office.

It is not necessary to program the single ES. They recognise automatically tone/impulse devices. When the public telephone branch office offers you both dialing possibilities, you can combinate telephones (and other terminal equipment) at will.

All ES are in a basic setting, that means they are mainly determined to be linked to telephones (no matter if tone or impulse).

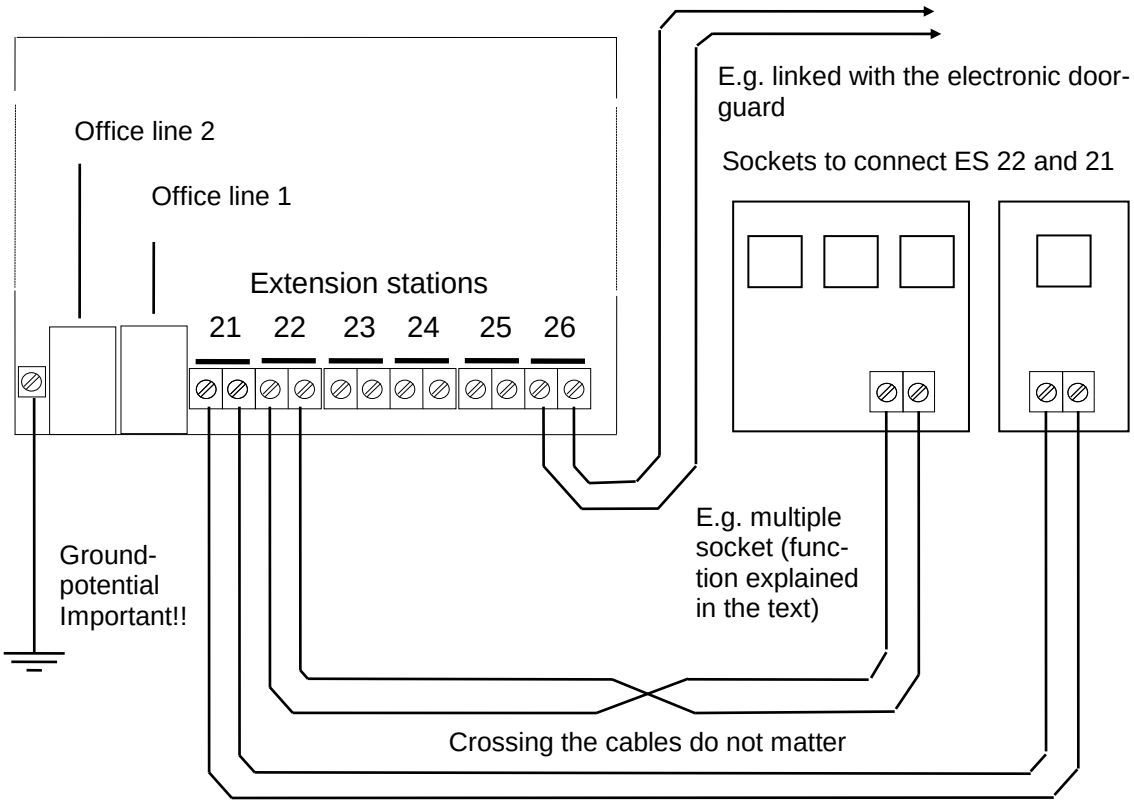
To switch between external or internal line and back you can use 0 (telephones with impulse dialing), or flash (or a small knock on the cradle). The button with this function is often signed with an “R”.

## 7.1.2 Connecting the extension stations (ES)

Link internal lines with two wires - the polarity plays no role. We advise you, to use single or multiple telephone sockets type RJ.

If you wish to connect in addition to telephones other terminal equipment, use multiple sockets with precedence.

If there is only a telephone connected at a multiple socket with precedence, the plug must be put into the first connector. If you add an answering machine to the telephone, the answering machine must be put into the first connector, the phone into the second. Another example: answering machine or automatic dialler.




Connect other ES the same way, a joint multiple wire cable for several ES is possible

### 7.1.3 Connecting the sockets

Sometimes the used sockets may have more screw-clamps to connect wires than two, then the right ones are marked either with a, b or 1,2. In addition, the proper clamps can be easily recognised: they are connected with two internal connector-springs.

In case of not being able to recognise the right two clamps, just give it a try. You only have to attempt all possible combinations, until you find the working one! A proper connection can be recognised by going off-hook. If you hear a tone, coming from the PABX, bingo! Be careful, because there may be high voltages in the internal lines, so always make sure, that the PABX power supply is not plugged into a mains socket.

### 7.1.4 Length and guide of cables

The length of the cable to the single ES (so his resistance) should not exceed the value given in the technical data list (else the transmission quality may be bad, or the PABX may not be able to recognise whether the telephone is on- or off-hook). The cable must not be guided outside the building, or nearby power cables.

### 7.1.5 Parallel connection of terminal equipment

Devices without approval (mainly modems and modem cards, sometimes answering machines) are often not able to disconnect the telephone, which operates at the same line or ES. In this case a multiple socket without precedence, but with parallel connectors or several parallel-connected sockets must be used. The second possibility is cheaper for the producer, but causes the following problems.

### 7.1.6 Connecting the telephone in front of the PABX

We strongly advise you not to connect telephones or other terminal equipment at the input of the PABX parallel to the office line.

Although a telephone connected this way seems to work, its connection and maintenance causes many, hard identificable problems, e.g. the quality and loudness level of speech transmissions sinks rapidly, dialing causes difficulties, and maintaining a fax or modem device becomes nearly impossible (mainly at faster transmission rates).

In case of a mains failure, or when the power supplies not plugged in, or when the PABX does not work for any reason - the first ES (No. 21) is always linked (by relays) to the office line. So you will not need another connection parallel to the office line.

## 7.2 Answering machines

An answering machine can be operated on any ES, also together with other terminal equipment (in one socket with precedence). A proper adjusting of the ES, regarding

external ringings and ringing delays, is reachable by a function, according to the custom wishes of the user.

The only sense to adjust an ES as answering machine-ES is that you can take over a connection to another ES by dialing the 4 (that means you enter into the connection lead by the answering machine).

So it is very easy to let an answering machine, which is equipped with a monitoring loudspeaker, build the connection to the subscriber, listen to who he is and what he wants and then perhaps take this connection over by dialing the 4.

So for this reason it is necessary to adjust the ES as answering machine-ES, see 📖 48. This adjusting is always valid, not regarding the operation mode (DAY/NIGHT).

If the connection to the answering machine shall not be disconnected any more, the basic setting of the ES stays the same (without answering machine). Different settings of the external ringings (e.g. different lines or connected/disconnected) for DAY- or NIGHT-mode, or a proper delay gives you the possibility to leave the answering machine always on.

## 7.3 Fax - operation with a passive switch

The fax is connected to any ES, which is adjusted as basic ES (not adjusted for fax), and is in automatic-receive order.

The ringing delay (adjusted at the fax or the PABX) gives the user the possibility to lift the handset earlier than the fax. A five-interval-delay is good compromise (the user has about 30 seconds time). Longer delays are not advisable.

Ordinal conversation lifted by the fax cannot be taken over to telephone ES - they are lost. The calling subscribers are often worried by the strange noise they hear, and think they have dialled the wrong number.

So incoming faxes must be recognised by the operator and linked with the fax ES.

But this operation mode is not suitable for professional usings (e.g. firms, bureaux), every external connection (including fax and modem) makes the telephone ring, which is very nerving for the users (who also have to link every fax connection with the fax-ES).

If TINA is used in households and if the expected number of incoming faxes is very small, it is a advantage, that the calling subscriber has not to pay the costs caused by an automatic fax switch (the fax lifts, even when nobody is at home).

Having well adjusted the ringing delay in DAY and NIGHT mode will lead to a satisfactioning results.

## 7.4 Modem - operation with a passive switch

The fax-operation-mode descriptions are the same as for a modem without automatic modem switch.

If the modem is mainly used for outgoing connections, it is not necessary to work with a automatic switch.

The situation becomes very complicated when you use modem together with other terminal equipment, e.g. fax and an answering machine. In this case manually switching is nearly impossible and the user sees the advantages of automatic switches.

## 7.5 Fax - operation with an automatic switch

The PABX TINA offers you the possibility of an automatic, silent (ES do not ring) fax switching. Connections with the CNG tone with 1100 Hz (some old faxes use another tone, so they will not be automatically recognised and switched) will be automatically switched to the fax ES.

Foundation for this function is to activate the automatic lifting of external connections by the PABX on one or two external lines (📖 47), setting one fax ES (📖 48) and connecting a fax, which is adjusted to automatic receiving

External ringings at the fax ES are always possible, even if other ES are programmed not to ring at external connections.

After the programmed delay the PABX lifts by itself and evaluate for approx. six seconds the data. After having recognised the CNG-tone, the PABX lets ring the fax-ES for 40 seconds. If the fax does not recognise the signal, ringings are heard at all other ES (mainly telephone-ES, but only those that are not programmed to forbid external calls), for 40 seconds

Attention: The external connection will be immediately interrupted, if a fax connection was recognised, but no fax-ES has been found!

## 7.6 Modem - operation with an automatic switch

Beside an automatic fax switch, TINA is also equipped with a possibility to switch modems automatically (with the 1300 Hz CNG-modem-recognition-tone).

Foundation for this function is to activate the automatic lifting of external connections by the PABX on one or two external lines (📖 47), setting one fax ES (📖 48) and connecting a fax, which is adjusted to automatic receiving.

For further information see instructions for automatical fax switching.

## 7.7 Combined terminal equipment fax - answering machine - telephone

Using combined terminal equipment, mainly the combination fax - answering machine - telephone is very popular, and has, for sure, also good economical reasons.

Employing those devices at telephone branch offices, which are not equipped with an automatic fax recognisation and switch, cause lots of problems.

Most of those branch offices are internally equipped with an automatic fax switch, which must be activated, so that the connection to the fax, answering machine or telephone can be properly assigned. The device lifts automatically, but so fast, that the user has no chance to lift by him. So connections that are not for the fax are automatically assigned either to the built-in answering machine or to the telephone.

The other ES do not get the opportunity to take over those conversations, because the connection is held by a combined facility. This non-satisfying behaviour is improveable by using the branch offices automatic fax switch. This switch, activated and adjusted like described above for the fax (the combined facility ES is adjusted the same way as a fax ES), makes sure, that conversation-connections will be signalled by a ringing at all ES, which are not programmed to forbid external ringings (so at the combination-ES, if you wish).

If the combination-ES is in addition combined as answering machine-ES, it is also possible to take over the conversation on another ES, if the combination-ES was originally lifted (only possible with connections, not recognised as fax) by dialing the 4.

## 7.8 Combined terminal equipment: fax - modem - answering machine - telephone

Devices in this combination (with an increasing number of PC equipped with a modem card) are to be connected the same way as terminal equipment with the PABX.

TINA offers all users of these devices an optimal usage in combination with an automatic fax and modem switch.

The ES of the above-explained facility must be also adjusted as fax-ES and modem-ES. The automatic taking over of an external connection is activated for one or both office lines (according to the user's need). This way, a operation of fax and modem can be made sure.

If you wish to connect conversations also to the internal answering machine, it is necessary to connect the external signalisation with the ES, when you are adjusting it. An additional adjusting of the ES as answering-machine ES makes it possible to take over a already built connection (only when connection is not a fax or modem connection) from another ES, by dialing the 4.

## 7.9 Electronic doorguard

You can link the electronic doorguard, working with a/b splitting and the possibility to build a connection by using the programmable tone or impulse dialing, at any of TINA's ES. The connection from the electronic doorguard to the PABX is built as internal connection, which it is convenient to adjust the proper ES as electronic doorguard-ES (🕮 48) and to adjust its dialing to 31 to 36 for a straight connection with the single ES, or 38 (group A) or 39 (group B) for group calls. For group calls from the doorguard it is necessary to build a connection with the doorguard from the ES, which are in group No. A or B, by dialing the 3, (🕮 52).

It is suitable to adjust an external ringing restriction for the doorguard-ES, see 🕮 51.

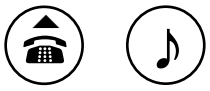
Programming the doorguard and operating the door-magnet is explained in details in the electronic doorguard operation manual.

# 8 Operation and basic information

## 8.1 Internal connection to a certain ES

Your aim is to call to another internal subscriber, who is also linked with TINA. The ES have the calling numbers 21, 22, 23, 24, 25, 26. After lifting the handset, the connection can be built by dialing one of those numbers.

Those internal are always (no matter how long the conversation lasts) free of charge. It is also not possible to tap these conversations with another ES. If another subscriber tries to get a connection with an ES that is already used for an internal conversation, he gets a busytone.



After lifting the handset the PABX reports with the internal tone 1 (lasting tone) and this way is signalling being prepared to receive a dialing. If you cannot hear this tone, it is not possible to dial, and you have to try again later.

After having dialled the numbers 21, 22, 23, 24, 25 or 26 the telephone of another internal ES starts ringing with the internal ringing tone (two short ringings, then pause…). You will get the busy tone, if the ES is already occupied or at wrong dialings. Just go on-hook again.

After having finished the conversation, make sure, that the handset is properly on-hook.

## 8.2 Internal connections to a group of ES (group calls)

By dialing the 27 all other non-occupied ES start to ring (= general group call). This way you can easily get a connection with a subscriber; you do not know where he is.

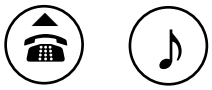
Group calls can also be used to get a connection with a certain group of subscribers (e.g. one determined bureau or department of a firm, or one certain floor of a house).

Your aim is, for example, to call another department, where the ES are programmed as group.

The possible two groups have the calling numbers 28 (group 1) and 29 (group 2).

After having dialled the 28 or 29 only those ES ring, which were programmed for group 1 (No. 28) or group 2 (No. 29). Further information to group programming, see 🕮 52.

Group calling can be used to build an internal connection, also with taking over internal conversation, either with waiting or without waiting of an internal connection. Group calls do not let the fax, answering machine, modem or electronic doorguard ring (when those are programmed for this).



After lifting the handset the PABX reports with the internal tone 1 (lasting tone) and this way is signalling being prepared to receive a dialing. If you cannot hear this tone, it is not possible to dial, and you have to try again later.

After having dialled the numbers 27, 28 or 29 the telephone of an internal group starts ringing with the internal ringing tone (two short ringings, then pause…). You will get the busy tone, if the ES is already occupied or at wrong dialings. Just go on-hook again.

After having finished the conversation, make sure, that the handset is properly on-hook.

## 8.3 Accepting an external call

The telephone(s) ring in the same rhythm like being connected with the office line (long ringing, pause, long ringing…).

The telephone rings. After lifting the handset, you have the connection.

During the conversation TINA offers you several special opportunities:

You can redirect the connection to any ES or group (with or without waiting whether the subscriber reports on the other ES). During the conversation you are able to contact another subscriber, on another ES, and then turn back to the external subscriber again.

You will find further explanations below.

After having finished the conversation, make sure, that the handset is properly on-hook.

## 8.4 Accepting an external connection at telephone, which does not ring

When you can hear the external ringing (long ringing, pause, long ringing…) anywhere, you are able to take over the connection on a non-ringing ES that is moor comfortable to reach for you.

By dialing the 4, you can take over the connection.

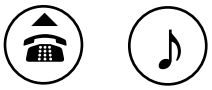
During the conversation TINA offers you several special opportunities:

You can redirect the connection to any ES or group (with or without waiting whether the subscriber reports on the other ES). During the conversation you are able to contact another subscriber, on another ES, and then turn back to the external subscriber again.

You will find further explanations below.

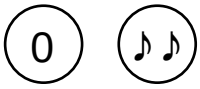
After having finished the conversation, make sure, that the handset is properly on-hook.

## 8.5 Office line access



After lifting the handset the PABX reports with a lasting tone and is so signalling being prepared to receive a dialing. If you cannot hear this tone, it is not possible to dial, and you have to try again later.

For an office line access dial the 0. After this you should hear the interrupted office line tone.




Other possibilities and a confined office line access are explained below.

Now dial the subscriber's number. The breaks between the dialled figures must not exceed 6 seconds.

During the conversation TINA offers you several special opportunities:

You can redirect the connection to any ES or group (with or without waiting whether the subscriber reports on the other ES). During the conversation you are able to contact another subscriber, on another ES, and then turn back to the external subscriber again.

You will find further explanations below.

After having finished the conversation, make sure, that the handset is properly on-hook.

# 9 Operation (details)

## 9.1 Office line access

If you cannot hear the tone after having lifted the handset, a tone-dialing receiver could not be assigned, and the dial will not be processed by the PABX (no matter whether the facility uses tone or impulse dialing). This situation does only happen very rarely (only when 4 subscribers lift simultaneously their handsets to dial a number. In case of this situation go off-hook again and try later.

In case of an ES operation order dial 0 to access the office line, or 90 for an access to any of the office lines, or 91 respectively 92 for an aimed access to office line 1 respectively 2.

In case of an user operation mode it is necessary to dial a four-figures number, the owners identification number (OIN), after having dialled the 90, 91 or 92. Having dialled the correct OIN, you get an access to the office line (public telephone branch office tone), if not the access is blocked (busy-tone 2). Dialing the 0, you get also an access to the office line, but only for the emergency calls.

Now dial the subscriber's number. The breaks between the dialled figures must not exceed 6 seconds.

Attention! Important! Often case of problems.

Using a telephone with memory, or other self-dialing devices (e.g. fax) it is necessary to program a delay from 3 to 5 seconds between the first 0 (respectively 90 + OIN) and the first dialled number. The reason for this is, that (especially older, non-digital) public telephone branch offices need a certain time to react at a new connection. Numbers dialled during this time will not be recognised and get lost.

If you use TINA in user-mode be careful not to betray the OIN, which lasts in the telephone memory, and can be easily (especially with telephones with a number-display) found out using the telephone-function REDIAL.

## 9.2 Calling attention to a office line interest

If the office line(s) is (are) occupied, the office line access is not possible, and you will hear the busytone.

Dialing the 5 into this busytone, you can announce your office line interest to the just talking subscriber (see 🕮 61), who hears three short tones in his handset.

These tones are only available at ES, which are adjusted for telephone (= basic adjusting). The signal will never be sent to connection with fax, modem, answering machine or the electronic doorguard, because this might cause damages.

## 9.3 Re-ringing when office line available again

If the office line(s) is (are) occupied, the office line access is not possible, and you will hear the busytone.

Dialing the 0 into this busytone you can make sure, that the telephone shortly rings three times when the office line becomes available again. This will remind you, that you are now able to make your telephone call.

## 9.4 Redirecting an external connection to another ES with waiting for a connection

Every external connection can be easily redirected to any other ES. The connection can even be passed around from ES to ES.

Dialing the 0 (from telephones with impulse dialing) or flash (from telephones with tone dialing) (if necessary a short knocking on the cradle) you get switched to the internal line of the PABX (internal tone 2). Then simply dial the number of the ES, you wish, or one of the three group numbers (see 🕮 52).

If the ES is unoccupied, it stars to ring (internal rhythm: two short ringings - pause -) and you will hear the ringing tone in your handset. After the ES has been lifted you get an internal connection, the external subscriber is not able to hear anything (except a melody, if programmed). When one of the ES goes off-hook, the other ES automatically receives the external subscriber.

If the ES is occupied, are you dialled a wrong number you get the busytone (1 or 2). You can leave this situation by dialing the 0 again (respectively flash, if necessary by a short knocking on the cradle).

In case of an outgoing connection a switching to the internal line is only possible after 6 seconds after having finished dialing the number!

Occasionally it may happen, that the switching through flash (or knocking on the cradle) causes no reaction, because all receiving tone dials are occupied. In this case give it a short time later another try. This phenomenon is explained on 🕮 31.

## 9.5 Redirecting an external connection to another ES without waiting for a connection

The action of redirecting an external connection to another ES without waiting for a connection is the same as redirecting an external connection to another ES with waiting for a connection. Going on-hook changes the ringing signal at the other ES: The internal ringing (two short ringings - pause -) becomes an external ringing (one ringing - pause -), for eight intervals (about 40 seconds).

If nobody lifts the handset during this time, the ringing will be automatically switched back to the original ES. This ES now rings eight times. In case of no lifting, the connection is interrupted.

This way you can easily for example switch your conversation into another room.

During the ringings, the external subscriber gets, the PABX evaluates the presence of busytones. In case of a busytone (that means the external subscriber went on-hook) the connection will be cancelled and the ringing stopped.

## 9.6 Re-inquiry on a internal ES during an external call

This occurrence is the same like redirecting an conversation with waiting for a connection. After the re-inquired subscriber went on-hook again, the original external connection is restored again. Also in this case the external subscriber is not able to hear anything (except a melody, if programmed) during the internal connection.

## 9.7 Calling attention to an incoming external connection during an internal call

If the so-called ‘knocking’ from an external line to the ES was programmed, you will hear a tone with the same rhythm as external calling (one second tone - four seconds pause -) in your handset in case of an incoming external connection. You can react with going on hook with you telephone. The internal subscriber gets a busytone. After one ringing you can lift the handset again, and get a connection with the external subscriber. If the ES has not programmed external ringings, you have to dial the 4 after having lifted the handset.

## 9.8 Conference

While questioning back (see chapter above) the ES, which has been built up the internal connection, has the possibility to introduce a conference between these two ES and a external subscriber.

The same way as described in the chapter „Redirecting an external connection to another ES with waiting for a connection“ (📖 32) you can take over the other subscriber for a conference, and after the impulse dialing 0, flash or a short knocking on the cradle all three subscribers will be in conference mode.

In the conference mode no other functions are possible, until one of the internal subscribers goes on-hook. When one of the internal subscribers goes on-hook the second connections stays. There is always the possibility to build up the conference connection again. Going on-hook of one of the subscribers is signalled by a short tone. So the other two subscribers can be sure, that the third one really went on-hook.

## 9.9 Temporary restriction of ES-ringings

Using the below stated ES-dials it will be possible to switch off (internal and external) ringings for this ES. This offers the user selecting or restricting the ringings. Is there, for example, an internal ringing restriction, the ES will only at incoming external connections (only if this is has been allowed in the system-programming to the ES). Redirecting an external connection to an ES with an internal ringing restriction is not possible. In case of an external ringing restriction, it is only possible to receive only internal connections, external ones can be only redirected from another ES. In case of an internal and external restriction it is not possible to build any connection with the ES.

Temporary ringing restrictions (external, internal or both) are signalled by a short tone after lifting the handset. Then the common lasting tone can be heard.

Programming restrictions on the ES:

Lift the handset; dial the 8 when you hear the lasting tone. In case of a negative tone, programming is not possible at this time. Try again later. (Explanation of the different tones, see 🕮 61.)

Now dial the 8 again plus the function figures listed below. Having chosen the proper combination, you will hear a positive tone.

**Removing temporary ES-ringing-restrictions 8 80**

The ES is accessible for internal signalisation; external ringings are the same as the programmed system adjusting of the PABX.

**Temporary restriction of external ringings 8 81**

The ES is not accessible for external connections (in case of an aimed in-dialing DISA, the other ES ring, if not busy). Redirecting an external connection from another ES is possible. Taking over external connections by dialing the 4 is possible. The restrictions are valid for both office lines.

Temporary ringing restrictions (external, internal or both) are signalled by a short tone after lifting the handset. Then the common lasting tone can be heard.

**Temporary restriction of internal ringings 8 82**

External ringings are possible (unless they were not restricted by dialing the 881, or forbidden by system-programming). Redirecting external conversation to another ES is not possible. Taking over external connection is possible by dialing the 4. This restriction is valid until the removal by dialing the 880. Temporary ringing restrictions (external, internal or both) are signalled by a short tone after lifting the handset. Then the common lasting tone can be heard.

## 9.10 External ringing operation-mode — DAY/NIGHT

Switching manually between DAY-mode and NIGHT-mode (this two orders do not need to be the same as real day and night are, they allow you switch quickly between two external ringing operation-modes). The user can set these modes from any ES.

**Setting of external ringing to DAY mode 88 3**

**Setting of external ringing to NIGHT mode 88 4**

Adjusting of ringings see 🕮 51.

Comfortable automatical switching is possible if the charging module is installed.

An example: There is only one person in the household; the PABX works in the DAY-mode, without automatic taking over of external connections. In this mode, the telephones are switched ring at external connections from both office lines, the answering machine, too, but with a delay of four ringings. An incoming external connection is first signalled on the telephones. The person lifts the handset and can have a conversation. Another connection, incoming during this conversation, is redirected to the answering machine (after the programmed delay). In the NIGHT-mode, for example, all connections are lead to the answering machine, no telephone rings.

## 9.11 Categorisation mode — DAY/NIGHT

Switching manually between DAY-mode and NIGHT-mode (This two orders do not need to be the same as real day and night are, they allow you switch quickly between two external ringing operation-modes). The owner sets these modes.

Using see 🕮 46.

Comfortable automatical switching is possible if the charging module is installed.

An example is a confined office line access after the working time is over.

## 9.12 Shortened dials when using the charging module

It is possible to put up to 10 telephone numbers into the built in memory. These telephone numbers can then be dialled on all ES by using the shortenings 60 to 69. When using the shortenings 60 to 69 all office line access restrictions set for the user, the particular ES or referring to the dialled prefix plus code numbers will be included. If office line access is forbidden for the ES, office line No. 1 will be automatically assigned.

The same way it is possible to put ten other telephone numbers into the memory (shortenings 70 to 79). Office line access restrictions set for the user, the particular ES or referring to the dialled prefix plus code numbers will be not included. Restrictions set by the dialings AD2 + 62N - 69N for DAY/NIGHT mode will stay valid. An example for the use of this function is that you can for instance call the subsidiary in Australia or the villa of the firm boss on the Bahamian islands. Another possibility is to use the shortened dials for emergency calls.

Attention! When using shortened dials do not dial the office line access numbers (0, 91, 92), only the two-figure shortened dial. It is not possible to use shortened dials at ES with automatical office line assigning.

| | |
|---|---|
| **Shortened dials (restrictions are valid; ES mode)** | **6X** |
| **Shortened dials (restrictions are valid; user mode)** | **6X UUUU** |
| **Shortened dials (restrictions not valid; ES mode)** | **7X** |
| **Shortened dials (restrictions not valid; user mode)** | **7X UUUU** |

X is the number from 0 to 9 (the counting figure of the shortened dial); UUUU is the UIN.

# 10 Tone in-dialing DISA

TINA makes possible an aimed tone in-dialing to an ES into a already built connection.

The only condition is, that the automatic overtaking of an connection for in-dialing, fax- and modem switch (🕮 51) must be activated for the concerned office line. A special command to switch the tone in-dialing on or off does not exist.

The calling subscriber has the possibility to dial one concrete ES (dialing numbers 21 to 26), or a group of ES (dialing numbers 28, 29). Instructions for group programming see 🕮 52.

After a connection has been built, the calling subscriber hears a melody or a message (only if the voice or charging module is recorded). This is a sign for the subscriber, that after this melody or the message has finished (!) he has for about six seconds the possibility for an in-dialing.

For an aimed in-dialing it is possible to use 21 to 26 (one of the ES 21 to 26 rings), or the in-dialing 28 to reach the group of users 1, or 29 to reach the group of users 2 (those are identical with group 1 and 2 for group calls). Group programming see 🕮 52.

If the dialled ES is not accessible, that means the external signalisation from the line is not connected, or this one is temporary blocked by a dial on the ES, the connection will be interrupted. This way the subscriber will know that the ES is not assessable.

If a temporary dialing blocks the signalisation or if the ES is not assessable for other reasons, all other ES start to ring.

ES, which are connected with external signalisation and are just in a conversation get a tone signalisation (‘knocking’) into the handset (only in case this signalisation is not forbidden).

If no in-dialing has been made all other ES (with connected signalisation) without restrictions start to ring after approx. 6 seconds. The ringing lasts max. 40 seconds. During these ringings the presence of a busytone is evaluated. If there is one the connection will be interrupted (because the other subscriber went on-hook).

If it has not been possible to build a conversation during this time, the connection will be interrupted.

Also in case of an in-dialing the time limited ringing is useful as protection for the calling subscriber.

As information for the calling subscriber he will hear five short tones shortly before the connection is interrupted (staccato).

# 11 Charges, pursuing the telephone charge

Telephone charges (naturally also charges for faxing, modem…) are set by firms, which run the telephone lines (e.g. the TELECOM) and depend on the distance (e.g. local calls, long-distance calls…) between you and your subscriber and, of course, the time your conversation is lasting.

The situation is complicated by the fact, that there exist some prefix pluscode numbers (e.g. in Germany the 0190… numbers) you have to pay for much more than e.g. for long-distance calls.

So the charge of a telephone call is always set by the prefix pluscode number you dial. The public telephone branch office 'knows' which prefix pluscode number is how expensive.

For every single connection the firm, which runs the telephone line counts the units, you talk (naturally the pulse interval at a long-distance call is much faster than at a local call.).

This pulse is called charging impulse, which your connection can (when you have ordered it from TELECOM) receive from the public telephone branch office. Every charging impulse has a certain charge, set by the TELECOM. It short tones have a frequency of 16 kHz, that is outside the telephone's frequency range. Sometimes these impulses are recognisable by a small crackle during a conversation (this sometimes causes problems for modems).

These impulses are the best way how to pursue (with the aid of a charge-counter or a PABX with a built-in charge counter) your telephone charges.

TINA evaluates the 16 kHz-charging impulses also for incoming connections (interesting option when the person to who is called has to pay the bill) and regards these impulses at the line- and ES-counters. These impulses are not regarded at user-counters and counting down credits will not be made there.

It is not always possible to receive these charging impulses, or the user is not willing to pay costs for them. Therefore the PABX offers you a so called pseudo-charging. Regarding that the PABX counts either, when adjusted, real impulses or generated pseudo-charging impulses the term 'charging unit' has been introduced.

## 11.1 Credits

Even in the basic furnishing, TINA offers you the possibility to count down the ES charging credit (ES operation mode) or the user charging credit (user mode).

The PABX counts the charges of every single ES (or, if in user mode, of every single user) and sums them up.

This function makes it possible for the owner to control and pursue exactly the accounts of money, spent by every single ES or user.

The owner has the possibility to assign an accurate account of charging units to every single ES, that means to every single user. This way, the owner can 'fill up' the users' charging credits. Description, see 🕮 43. After having exhausted these credits the office line access is not possible any more.

If charging impulses are not available, you can use minutes as charging units, or you can bring your charges under control by confining the access for the concerning ES, or allow only local calls.

## 11.2 Pseudocharging

The exactness of the pseudocharging depends on the chosen compromise for the adjusting of the time pulses for the single fields and on the telephone operation, that is going over the PABX.

Example: If for calls to foreign countries an time pulse is adjusted, that corresponds to the price you have to pay when you phone to European countries but most of your calls to foreign countries are lead with Australia, the pseudocharging strongly underestimates the real costs. The same is valid for calls to other cities.

Time pulses, corresponding to the time between the 16 kHz charging impulses, are definable for local calls, toll calls e.t.c. The default settings are: 3 Minutes for local calls, 30 seconds for non-local calls and 8 seconds for calls to foreign countries. You can change these settings with your telephone or your PC (when you posses a built in charging module, with which you can very good adjust the times by noted operation mode and setting). The time-counter starts after the dial to the public telephone branch office (the first unit is regarded 6 seconds after having dialled the last figure).

Charges, depending on the day/time will not be regarded, so that it is necessary to regard the time, the conversations are lead.

The adjusting of the time intervals for the pseudocharging by telephone (mm is the time unit in minutes, ss is the time unit in seconds, both in the range 1 to 99):

| | |
|---|---|
| **Time pulse for local calls in minutes** | **(AD1) + 60 mm** |
| **Time pulse for non-local calls in seconds** | **(AD1) + 61 ss** |
| **Time pulse for toll calls in seconds** | **(AD1) + 62 ss** |

The software for the charging module MEH206 (which is included!) offers you a very good and precise tool to evaluate your charges, by using the pseudocharging. Using this software, it will be possible for you to define individual time pulses for any prefix plus code numbers, and, in addition, depending on the daytime. This well known pseudocharging is not depending on the simple one, described above and used for the PABX.

## 11.3 Important advises for the charging problem

There are occasionally still old public telephone branch offices in use, which work with relays. These offices send their last charging impulse after the connection has been finished. Of course the PABX cannot registrate this last pulse.

Solving this problem technically would not be suitable expensive, because this is a really seldom and time confined phenomenon.

Another reason for deviations could be the inductions into the line caused by other telephone lines.

So it is not possible to give an absolute warranty for the precision of the built-in charge counter. The charges counted by the TELECOM might distinguish to the value counted by TINA.

This distinguishings are so small, that they are neglectable. The charge counter offers you a very good help, to get your charges under control.

## 11.4 Accessory modules

The additional modules can be inserted by anyone, which means, that every layman can provide the new installation. The only assume is, to plug out the mains power supply before starting any modifications.

TINA is equipped with a universal interface. This way the CPU can communicate and control the modules. If there will be some new extension modules, which will need software, the CPU is not equipped with, a new CPU will be available to an affordable price (the CPU is easy to change, for it is placed in a socket), which will contain the old plus the new software. So you will not miss probated function and you will be able to use new, special functions.

### 11.4.1 Voice-module MS 206

Equipping TINA with the voice module MS 206 gives you the possibility to question the state of every single charging- and credit counter of every single ES (ES-mode) or user (user-mode) from any telephone (e.g. the account is 0234. You will hear the message „two-three-four“ in your handset.) You can question this message from every ES by making an information dial. For further infos to information dials see 🕮 57.

### 11.4.2 Conversation pursuing module MEH 206

The module pursues and stores which ES or which user dialled, which line was used, which number was dialled at which date and time, how long the conversation lasted (the module has a built-in real time clock, working with a crystal) and how many charging impulses were counted.

It is equipped with a DC-insulated PC interface.

The MEH 206 can store date from up to 2.000 connections, so that it is not necessary to connect the PC permanently.

The delivery includes comfortable software for MS Windows ® (version 3.1, 95, NT), that is able to evaluate, filter and arrange data nearly at will. Telephone numbers can be assigned to names, so that you do not have to look at meaningless numbers but their possessors.

The software also makes possible to adjust the PABX even more easily and dialing from the computer. All programmings, described in this manual, can be easily done

from your PC. You can also have your settings listed on your screen, and easily change them.

If the PABX is permanently linked with the computer, you can watch outgoing dials, and so forbid aimed ES or users to build a connection to any account of concrete prefix plus code numbers.

The access to the program is protected by a password.

The best way to get used with broad variety of using possibilities of TINA and the module MEH 206, is it download the latest software for the charging module. This software also works without the module.

Our Internet address is http://www.bonnel-tech.com.

# 12 Adjusting the PABX

## 12.1 Important things about the owners' identification number (OIN)

Only authorised people (who are called 'the owner' in this manual) have the permission to make adjusting on the PABX. To make TINA not assessable to anyone, a four-figures number, called the owners' identification number (OIN) has been introduced. Originally the number is adjusted to 8888. The owner can always change it.

We strongly advise you not to forget the OIN. Note it, and keep it on place, that is only assessable to you.

If this number gets lost, it is not possible to use the functions, the OIN is necessary for, or change the number (you need the old OIN to do this). The owner cannot reset the PABX.

In this case it would be necessary to give the producer or your dealer a telephone call. You would have to prove your authority by giving your address and the serial number, stated in this manual. The producer will then reset your TINA telephonically.

An easier way to reset the PABX would be assessable for everyone, and would not guarantee enough safety.

The producer reserves the right to demand a reasonable payment for this service, or delegate it to his franchised dealer.

## 12.2 Changing the owners' identification number (OIN)

The owner has the possibility to change the OIN (originally 8888) to a new combination, that only has does know.

Attention!

Having changed the OIN, a system adjusting of the PABX is only possible using this number!

Carry out this change with great responsibility and make sure that the new OIN is properly hidden.

**Changing the OIN** **83 + XXXX (valid OIN) + YYYY (new OIN) + 99**

Lift the handset, and dial the 8, when you hear a lasting tone. Wait for a positive tone (if you hear a negative tone, go on-hook again, and try later). For information about the tones see 🕮 61.

Hearing a positive tone dial the 3 + OIN. Having entered the right OIN you will hear a positive tone, else the busytone 2. In this case the OIN stays the same.

If you hear a positive tone, dial the new four-figured OIN.

Confirm the new, properly entered OIN by dialing the 99. After having dialled the 99 you will hear a positive tone. If you are not sure having typed the proper new OIN, just go on-hook before dialing the 99, the OIN stays the same!

If more than four figures were dialled, you will hear the busytone 2, as signal for the wrong dial. Simply go on-hook, to quit this situation. The old OIN stays the same.

If you entered the OIN at telephone with display, you should make sure, that nobody can get your OIN by pushing the redial button (this person would be able to change his rights on the PABX). To avoid this, lift the handset again after having entered your OIN and dial a neutral number (e.g. the 1).

## 12.3 Changing the users' identification number (UIN)

The user has the possibility to replace the old UIN by a new one (numbers from 1111 to 6666). Do not forget that you will have to remember the new UIN to access the office line! So carry out this change with great responsibility.

In the improbable case that one of the users changes his personally UIN and chooses the same one as another user, the PABX will react with a negative tone. TINA will block both UIN (accessing the office line with these UIN will not be possible). The users must ask the owner to bring their UIN back (see 🕮 46), and then repeat the programming.

(In case of two same UIN the PABX would be able to make a difference between them, and the charge counter could use one account.)

Like you can see it advantegeous to use four really accidental figures, so that the possibility that two users chose two same numbers will be reduced to a minimum.

**Changing the UIN** **84 + XXXX (valid UIN) + YYYY (new UIN) + 99**

Lift the handset, and dial the 8, when you hear a lasting tone. Wait for a positive tone (if you hear a negative tone, go on-hook again, and try later). For information about the tones see 🕮 61.

Hearing a positive tone dial the 4 + UIN. Having entered the right UIN you will hear a positive tone, else the busytone 2. In this case the UIN stays the same.

If you hear a positive tone, dial the new four-figured UIN.

Confirm the new, properly entered UIN by dialing the 99. After having dialled the 99 you will hear a positive tone. If you are not sure having typed the proper new UIN, just go on-hook before dialing the 99, the UIN stays the same!

If more than four figures were dialled, you will hear the busytone 2, as signal for the wrong dial. Simply go on-hook, to quit this situation. The old UIN stays the same.

## 12.4 Configuration for the access dialing 1 (AD1 = 81 + OIN)

Access dialing: 81 + OIN

Process:

Lift the handset, and dial the 8, when you hear a lasting tone. Wait for a positive tone (if you hear a negative tone, go on-hook again, and try later). For information about the tones see 🕮 61.

In case of a positive tone dial 1 + OIN, if the OIN is valid you will hear a positive tone.

Dialing one of the combinations listed below, you will reach the change you want.

A proper adjusting is always confirmed by a positive tone.

All other changes (until going on-hook again) can be done without a new access dialing. That is why the access dialing (listed below as AD1) was always put into brackets.

An exception is recording numbers and texts on the voice-module, where it is necessary to enter the whole block of AD-number and programming number.

### 12.4.1 Adjusting the charging

**Switching off counting down and resetting charges (AD1) + 00**

This is valid for ES and users, the counting down of charges is interrupted; the adjusted charging unit (either 16 kHz pulse or pseudocharging) lasts.

**Switching on counting down and resetting charges (AD1) + 01**

This is valid for ES (in ES-mode) or for the user (in user-mode). Simultaneous the basic credit account is reset.

From this moment the counting down of incoming charging units from the charging credits begins.

It is necessary to refuel the credits. Without this, no connection (except emergency-calls) can be build.

**Adjusting the charging-unit: 16 kHz charging impulses (AD1) + 02**

The PABX works with charging-units sent by the TELECOM. Resets all charging-counters and accounts (for ES and users).

**Adjusting the charging-unit: Pseudocharging (AD1) + 03**

If charging units are not available. the PABX generates own pseudocharging impulses. The important thing is to adjust the pulses properly (📖 38). Resets all charging counters and accounts (for ES and users).

**Resetting the ES- or line charging-counter (AD1) + 1N**

An aimed resetting of the ES-counter (N=1 to 6) or office line-counter (N=7 for line 1, N=8 for line 2).

**Resetting the users' credit-counter (AD1) + 2U**

An aimed resetting of the users' credit-counter (U=1 to 6)

**Adjusting the charging credit (AD1) + 3N XXXX**

Either to the ES or to the user (depending on active operation-mode; N= 1 to 6) will be assigned the amount of XXXX charging units (e.g. for 60 units you will have to dial 0060). The maximum of adjustable units is 9999. The counting-down of charging units must be activated, otherwise this setting has no sense, and you will hear the busytone.

**Refilling the charging credits** **(AD1) + 4N XXXX**

To an amount of charging units (depending on active operation-mode; N= 1 to 6) will be assigned the amount of XXXX charging units. The maximum of adjustable units is 9999. The counting-down of charging units must be activated, otherwise this setting has no sense, and you will hear the busytone.

ATTENTION! If the amount of assigned charging units exceeds 9999, it will be set automatically to 9999.

## 12.4.2 Programming the voice module

**Recording numbers** **AD1 + 04**

When you begin to use TINA with the voice module MS 206, it necessary to record numbers from zero to nine on the module. The individual recording by the user makes sure a proper use of this module in several languages.

After having entered the programming code AD1 + 04 dial the number, you wish to record. After having heard a short tone clearly pronounce the number into your handset. Wait until the device repeats the just recorded figure. Repeat this action to record all figures from zero to nine.

The numbers can be also recorded in different orders, or only some of them (when you are not satisfied with the sound of some of them).

Finally quit the programming by going on-hook.

**Recording aiding texts** **AD1 + 05x**

After having lifted the office TINA can give you an information (max. 5 seconds) about the name of the station and the possibility of a in-dialing, for example: „Here is the company Ferguson 🕮 Co. Dial the in-dialing or wait for a connection.“.

If this announce is just active on the other line, the calling subscriber will hear a melody instead.

We advise you to wait with the in-dialing when the announce is over because dialings cannot always be correctly evaluated.

It is also possible to record aiding-texts, which give you information about the state of counters and credits.

| Text | Maximal length | Dialing |
|---|---|---|
| "Counter" | (1s) | AD1 + 051 |
| "Credit" | (1s) | AD1 + 052 |
| "Line" | (1s) | AD1 + 053 |
| "ES" | (1s) | AD1 + 054 |
| "User " | (1s) | AD1 + 055 |
| Intro. Announce | (5s) | AD1 + 056 |

Record the messages the same way as the numbers. New announces can be monitored together with the information dialing numbers by dialing the ‘508’, see 🕮 57.

### 12.4.3 Adjusting the forbidden plus code prefix numbers (FN)

**Adjusting the FN 1** **(AD1) + 51 XXXX**

The default setting is 0607, activated on all ES and users.

**Adjusting the FN 2** **(AD1) + 52 XXXX**

The default setting is 0609, activated on all ES and users.

It is necessary to adjust one to four valid figures as FN. Entering the figures is always confirmed by a positive tone. After having entered the number, go on-hook.

We advise you to make the adjusting of the FN as last operation, if you want to make several changes to the access dialing 1.

### 12.4.4 Adjusting the awaking (only with a charging module)

If this function is basically set for the ES by the owner it is possible to use it without entering the access code, that means everyone is able to use it with a telephone by the owner for the single ES.

**Set the awaking for ES N** **(AD1) + 7 N hh mm**

N - is the ES (1..6), hh - hour (00-23), mm - minute (00-59), for example 06 30 for 6:30 AM, or 1946 for 7:45 PM.

**Switching off the awaking for ES N** **(AD1) + 7 N 99 99**

With a telephone on the ES for the particular ES

**Adjusting the waking right on the ES** **885 hh mm**

**Switching off the waking right on the ES** **885 99 99**

The function of the awaking ringing: Having reached the set time, the ES starts to ring up to 1 minute (2,7 seconds ringing, 2,2 seconds pause). After lifting the handset you will hear a negative tone (5 x short tone). The ringing will be done only once. After that the setting is reset. Switching off the set awaking ringing was chosen, because this function will be used only for particular situations (e.g. for not to forget a urgent date), or as a service in hotels, but it will not take over the function of a normal alarm clock.

If the ES is busy during the alarm time, the ringing will be done after the ES is immediately available again.

## 12.5 Configuration by using the AD 2 (AD2="82 + OIN" )

Access dialing: 82 + OIN

Process:

Lift the handset, and dial the 8, when you hear a lasting tone. Wait for a positive tone (if you hear a negative tone, go on-hook again, and try later). For information about the tones see 🕮 61.

In case of a positive tone dial 2 + OIN, if the OIN is valid you will hear a positive tone.

Dialing one of the combinations listed below, you will reach the change you want.

A proper adjusting is always confirmed by a positive tone.

All other changes (until going on-hook again) can be done without a new access dialing. That is why the access dialing (listed below as AD2) was always put into brackets.

**Adjusting categorisation into DAY-mode (AD2) + 030**

**Adjusting categorisation into NIGHT-mode (AD2) + 031**

See 🕮 35.

**Pause between external ringings shorter than 7 sec (AD2) + 040**

**Pause between external ringings longer than 7 seconds, max. 12 sec (AD2) + 041**

Normally, and in most an adjusting to a pause < 7 seconds is all right. In seldom cases the pauses between the office line-ringings may be longer than seven seconds. This depends on the fact how much the public telephone office of your town is burdened. For the ringing-delay function (see 🕮 25) it is necessary to let the PABX know how long TINA will have to wait until the next ringing (after that time passed by the internal ringing counter will be reset.

**Resetting the users' identification number (UIN) (AD2) + 05U**

The user U gets UUUU as UIN

Example: User 1 forgot his UIN. By dialing the AD2 + 051 the owner can reset the UIN to 1111.

**The device linked to ES No. 2N uses a flash length from 80 to 400 ms (AD2) + 06N**

**The device linked to ES No. 2N uses a flash length up to 1000 ms (AD2) + 07N**

The length of the flash a device uses is establishable in its operation manual. The normal length is from 80 up to 120 ms.

**Adjusting to ES operation mode (AD2) + 100**

This resets the charging counters and credits (both of ES and users). Counting the charging-units and ,if programmed, counting down charging credits will now be made for this ES. For an access to the public telephone branch office, the categorisation will be useful (see 🕮 48), which is adjusted by dialing the 30N to 36N for each single ES (N=1 to 6).

In ES-mode the office line access is possible by dialing these numbers:

| | |
|---|---|
| 0 or 90 | Aimed access to line 1 or 2 (by chance). |
| 91 | Aimed access to line 1 |
| 92 | Aimed access to line 2 |

In case of emergency calls and the automatic assigning of an office line (see 🕮 51) the user credits are not counted down.

**Adjusting the user-mode (AD2) + 101**

This resets the charging counters and credits (both of ES and users). Counting the charging-units and, if programmed, counting down charging credits will now be made for this ES and the user. Counting down the charging credits begins from this moment on, no matter from which ES the user converses. For an access to the office line the categorisation (see 🕮 48) is advisable. You can adjust it (by dialing 40U to 46U) for each user (U= 1 to 6) (see 🕮 50).

In the user mode the office line-access is only possible by dialing these numbers:

| | |
|---|---|
| 0 | Only emergency calls |
| 90 + UIN | Access to office line 1 or 2 (by chance) |
| 91 + UIN | aimed access to office line 1 |
| 92 + UIN | aimed access to office line 2 |

The UIN (users' ident. number) n must be adjusted 1111, 2222 to 6666

In case of emergency calls, or an automatic assigning of the office line (see 🕮 51) the credits will not be counted down.

**Switching off the automatic lifting of office line 1 and 2 (AD2) + 110**

When using a modem or fax, the automatic lifting must be on.

**Switching on the automatic lifting of office line 1 (AD2) + 111**

When using a modem or fax, the automatic lifting of the office line 1 must be on.

**Switching on the automatic lifting of office line 2 (AD2) + 112**

When using a modem or fax, the automatic lifting of the office line 2 must be on.

**Switching off the melody (music off hold, valid for both office lines) (AD2) + 120**

**Switching on the melody (music on hold, valid for both office lines) (AD2) + 121**

The calling subscriber will always hear this simple melody while the conversation is parked (redirecting the call/re-inquiry). It is a sign for him/her that the connection did not break down.

**Resetting the ES (AD2) + 20N**

This resets the adjusting of the ES 2N (N=1 to 6) as fax, modem, answering machine or the electronic doorguard. The basic setting is meant for telephone.

**Setting an ES into fax-mode** **(AD2) + 21N**

This configures the ES 2N (N=1 to 6) as fax-ES (cancels the setting of another ES, configured as fax-ES

You can adjust any ES into fax-mode, even in combination with a modem- or answering machine-ES (combining with the doorguard-ES is not possible!).

If the automatical lifting is switched on, fax connections (if recognised) will be redirected to the ES, so that other ES do not ring.

**Setting an ES into modem-mode** **(AD2) + 22N**

This configures the ES 2N (N=1 to 6) as modem-ES (cancels the setting of another ES, configured as modem-ES

You can adjust any ES into modem-mode, even in combination with a fax- or answering machine-ES (combinating with the doorguard-ES is not possible!).

If the automatical lifting is switched on, modem connections (if recognised) will be redirected to the ES, so that other ES do not ring.

A transfer-ratio of 33,6 kBaud is possible for modem-connections, but is always depending on the quality of the external connection.

**Setting an ES into answering machine-mode** **(AD2) + 23N**

This configures the ES 2N (N=1 to 6) as answering machine-ES (cancels the setting of another ES, configured as answering machine-ES).

If the automatical lifting is switched on, it is possible to take over the call on another ES by dialing the 4, even after the answering machine has already lifted.

If a fax- or modem-connection has been recognised, the taking over is not possible, even when the answering machine-ES is combined with one of these two devices.

**Setting an ES into doorguard mode** **(AD2) + 24N**

This configures the ES 2N (N=1 to 6) as electronic doorguard-ES (cancels the setting of another ES, configured as electronic doorguard-ES).

By dialing the 31 to 36, or group calls 37, 38, 39 from this ES, you can make an aimed signalisation at the ES (1 to 6), or a general group signalisation (37); dial the 38 for group No. A of Es and dial the 39 for group No. B

## 12.5.1 Categorisation of the office line access in ES-mode

**Only internal connections allowed** **(AD2) + 30N**

The ES 2N (N=1 to 6) is not allowed to access the office line; outgoing conversations are not possible (Emergency calls can be made).

**Only local calls allowed** **(AD2) + 31N**

The ES 2N (N=1 to 6) is allowed to access the office line only for local calls. All numbers, beginning with a zero are forbidden.

**Long distance-calls forbidden (AD2) + 32N**

The ES 2N (N=1 to 6) is allowed to access the office line for all calls, except long distance-calls. All numbers, beginnings with a double zero are forbidden.

**No restrictions (AD2) + 33N**

All connections except those with forbidden prefix plus code numbers (if set) are allowed.

**Forbidden prefix plus code numbers 1 and 2 are not valid for the ES (AD2) + 34N**

Forbidden prefix plus code numbers 1 and 2 are not valid for the ES 2N (N= 1 to 6)

**ES cannot dial the forbidden prefix plus code number 1 (AD2) + 35N**

The ES N (N=1 to 6) is not allowed to dial the forbidden prefix plus code number 1.

**ES cannot dial the forbidden prefix plus code number 2 (AD2) + 36N**

The ES N (N=1 to 6) is not allowed to dial the forbidden prefix plus code number 2.

### 12.5.2 Categorisation depending on the DAY/NIGHT-mode

In some cases it is meaningful to restrict the office line access for some times of the day, for instance during and after the working time. The DAY/NIGHT-mode is switchable either manually by dialing or automatically by the charging-module-clock.

Emergency calls are always possible from ES with a confined access.

**ES N has no office line access in DAY-mode** **(AD2) + 62N**

**ES N has office line access in DAY-mode (only to line 1)** **(AD2) + 63N**

**ES N has office line access in DAY-mode (only to line 2)** **(AD2) + 64N**

**ES N has office line access in DAY-mode** **(AD2) + 65N**

**ES N has no office line access in NIGHT-mode** **(AD2) + 66N**

**ES N has office line access in NIGHT-mode (only to line 1)** **(AD2) + 67N**

**ES N has office line access in NIGHT-mode (only to line 2)** **(AD2) + 68N**

**ES N has office line access in NIGHT-mode** **(AD2) + 69N**

### 12.5.3 Access restrictions to the office line in user mode

**Only internal connections allowed** **(AD2) + 40U**

The user U (U=1 to 6) is not allowed to access the office line, outgoing conversations are not possible (Emergency calls can be made).

**Only local calls allowed** **(AD2) + 41U**

The user U (U=1 to 6) is allowed to access the office line only for local calls. All numbers, beginning with a zero are forbidden.

**Long distance-calls forbidden** **(AD2) + 42U**

The user U (U=1 to 6) is allowed to access the office line for all calls, except long distance-calls. All numbers, beginnings with a double zero are forbidden.

**No restrictions** **(AD2) + 43U**

All connections except those with forbidden prefix plus code numbers (if set) are allowed to user U (U=1 to 6).

**Forbidden prefix plus code numbers 1 and 2 are not valid for the ES** **(AD2) + 44U**

Forbidden prefix plus code numbers 1 and 2 are not valid for the user U (U= 1 to 6)

**ES cannot dial the forbidden prefix plus code number 1** **(AD2) + 45U**

The user U (U=1 to 6) is not allowed to dial the forbidden prefix plus code number 1.

**ES cannot dial the forbidden prefix plus code number 2 (AD2) + 46U**

The user U (U=1 to 6) is not allowed to dial the forbidden prefix plus code number 2.

### 12.5.4 Signalling an incoming connection into a internal conversation

**Turn off knocking (AD2) + 50N**

The ES N (N=1 až 6) does not get a sign (knocking) in case of an incoming external connection during an internal conversation.

If there are also used other devices except telephone (e.g. fax or modem) for internal calls, we advise you to turn off the knocking. Otherwise it might come to problems during the data transmission.

**Turn on knocking (AD2) + 51N**

The ES N (N=1 až 6), gets a sign (knocking) in case of an incoming external connection during an internal conversation.

If there are also used other devices except telephone (e.g. fax or modem) for internal calls, we advise you to turn off the knocking. Otherwise it might come to problems during the data transmission.

### 12.5.5 Automatic assigning of the office line

**Turn off the automatic assigning of the office line (AD2) + 60N**

After having lifted the handset the ES N (N= 1 to 6) will have to dial the access-dialing, and is subjected to all the restrictions of an office line access.

**Turn on the automatic assigning of the office line (AD2) + 61N**

After having lifted the handset the ES N (N= 1 to 6) will be immediately automatically assigned to the office line.

This setting is sometimes useful for terminal equipment, which is wished to have a direct access to the office line. Internal connections with such an ES are only possible in the direction to this ES, not coming from this ES. An ES adjusted like this is also subjected to the adjusted categorisation of office line access.

### 12.5.6 Adjusting external ringings

**Turn off external ringings at ES (AD2) + 70N**

Turning off external ringings at ES 2N (N=1 to 6) without regarding the DAY-/NIGHT-mode. This does not influence ES, adjusted as fax- or modem-ES with automatic taking over and recognising one of the stated devices.

**Ringings at the ES turned on for office line 1 and DAY-mode (AD2) + 71N**

The ES 2N (N=1 to 6) gets in DAY-mode only ringings from the office line 1.

**Ringings at the ES turned on for office line 2 and DAY-mode (AD2) + 72N**

The ES 2N (N=1 to 6) gets in DAY-mode only ringings from the office line 2. (This adjusting is senseless at TINA 106).

**Ringings at the ES turned on for office line 1 and 2 and DAY-mode (AD2) + 73N**

The ES 2N (N=1 to 6) gets in DAY-mode only ringings from the office line 1 and 2. TINA 106 does only ring at office line 1.

**Ringings at the ES turned on for office line 1 and NIGHT-mode (AD2) + 74N**

The ES 2N (N=1 to 6) gets in NIGHT-mode only ringings from the office line 1.

**Ringings at the ES turned on for office line 2 and NIGHT-mode (AD2) + 75N**

The ES 2N (N=1 to 6) gets in DAY-mode only ringings from the office line 2. (This adjusting is senseless at TINA 106).

**Ringings at the ES turned on for office line 1 and 2 and NIGHT-mode (AD2) + 76N**

ES 2N (N=1 to 6) gets ringings from both office lines (1 and 2) in NIGHT-mode.

TINA 106 with one office line only from line No.1.

Programming at the particular ES: In the default setting or after a reset (see 🕮 46) external ringings in DAY- and NIGHT-mode are connected. The first step will be to disconnect the ringing from the ES (instruction: see first function of this chapter). The next step is to switch on the ringing, using one of the above listed functions.

**ES ringing delay (AD2) + 90NX**

External ringings at the ES 2N (N=1 to 6) will be delayed for X intervals. One interval are five seconds (1 second ringing - 4 seconds pause).

If X = 0, the ES 'gets' the ringing immediately (normal mode).

This delay is not used in connection with aimed in-dialing, but, without regarding which line, for the operation mode of external ringings (DAY/NIGHT).

## 12.5.7 Putting an ES into a group for group calls

**Resetting of all group call settings (AD2) + 80N**

It is valid for the ES 2N (N=1 až 6). It refers to group calls from the ES and from the electronic doorguard.

**Putting the ES into group 1 (AD2) + 81N**

The ES 2N (N=1 to 6) is put into group 1, which makes group calls from another ES possible (but not from an ES, adjusted as electronic doorguard).

Group 1 is reachable by dialing the 28.

The number 28 is valid for the in-dialing DISA. So groups are also reachable for external subscribers

**Putting the ES into group 2** **(AD2) + 82N**

The ES 2N (N=1 to 6) is put into group 2, which makes group calls from another ES possible (but not from an ES, adjusted as electronic doorguard).

Group 2 is reachable by dialing the 29.

The number 29 is valid for the in-dialing DISA. So groups are also reachable for external subscribers

**Putting the ES into group A (from the el. doorguard)** **(AD2) + 83N**

The ES 2N (N=1 to 6) is put into group A for group calls from the electronical doorguard.

The group A is reachable by dialing the 38.

Sometimes it can be clever to make different groups for the doorguard than for normal use. That is why the groups 1, 2 and A, B have been introduced.

**Putting the ES into group B (from the el. doorguard)** **(AD2) + 84N**

The ES 2N (N=1 to 6) is put into group B for group calls from the electronical doorguard.

The group B is reachable by dialing the 39.

Sometimes it can be clever to make different groups for the doorguard than for normal use. That is why the groups 1, 2 and A, B have been introduced.

### 12.5.8 Flash into an external connection for an operation of public telephone branch offices.

During maximal 6 seconds after the dial of the last number a flash is possible without an external operation. This flash is copied into the external connection.

After this time period of 6 seconds a flash on a ES will have the switching into a internal connection as result. It is possible to send a flash into the internal connection by making the tone-dialing of the figure 9. After this the ES automatically returns to the office line and can dial another ton-dialing to get the wished function.

**Possibility flash switched off** **(AD2) + 15 0**

**Possibility flash switched on** **(AD2) + 15**

## 12.6 Bringing the PABX back into one of the default settings

**Full reset (default settings)** **(AD2) + 000**

Full reset into default settings, including the reset of all counters and credits. The OIN is set back to 8888, the UIN back to 1111 to 6666.

**Partly reset (default settings) (AD2) + 001**

Default settings, but no counter and credit resets. The identification numbers remain.

**Setting the PABX into pre-programmed mode < 1 > (AD2) + 002**

**Setting the PABX into pre-programmed mode < 2 > (AD2) + 003**

**Setting the PABX into pre-programmed mode < 3 > (AD2) + 004**

**Setting the PABX into pre-programmed mode < 4 > (AD2) + 005**

This will set the PABX into the pre-programmed modes, like shown in the table on 📖 73. No counter and credit resets. The identification numbers remain.

## 12.7 Redirecting ringings for incoming external connections with in-dialing

**Redirecting ringings (AD2) + 9 N M Y**

N - Original ES, to which the original ringing after a in-dialing is lead (1 .. 6).

M - Aimed ES, to which the ringing has been redirected (1 .. 6 - aimed, 7 - all ES, 8 - group No.1, 9 - group No. 2, 0 - cancels redirecting for ES N).

Y - number of ringings to the basic ES N before redirecting (0 .. 9, in case of a 0: immediate redirecting).

Pay attention when adjusting the Y-value - number of ringings: It does not make any sense to exceed the maximum number of ringings (8), made when redirecting a connection.

Example for the situation when redirecting is adjusted for an ES, that already redirected: If ES A is redirected to ES B and ES B again to ES C, and both ES (A and B) have the adjusted the same Y-value (number of ringings), the ringings ends at ES C. Only if ES B has a higher value of ringings adjusted it will ring with the number of ringings, which is the difference of the Y-values. The reason for this is that the number of ringings is counted from the moment on, when the ES itself starts to ring. The ES can ring only that number of ringings that remain on it.

If one of the ES is adjusted to group ringings, this setting is the last one to be regarded that means the adjusting of the ES of the aimed group will not be regarded!

In case of an in-dialing from an office line redirections, set for the ES, have no function.

## 12.8 Listening what is going on in a room

Your TINA offers you the possibility to control a room acoustically even from long distances (you do not need any extra equipment, just to go off-hook with your handset). This way you can for example make sure that your little children sleep.

The handset of the telephone on the chosen ES has to be lifted and the 888 has to be dialled (as sign that this ES is now used for the listening, this gives you the possibility to choose also several ES). The ES will be prepared for the listening until you go on-hook again.

This function has multiple protection against abuses: a) Listening must be permitted by programming, b) The handset has to be off-hook after having dialled the 888 and c) for external listening it is necessary to know the OIN.

Settings:

| | |
|---|---|
| **Possibility to listen off** | **(AD2) + 14 0** |
| **Possibility to listen on** | **(AD2) + 14 1** |
| **Adjust an ES as listening-ES (handset must be off-hook)** | **888** |
| **Listening what is going on by an internal connection** | **889 N** |

After having dialled the 889 N (N = ES 1…6) you will hear a positive tone confirming that an ES, which has been defined as listening ES (by having dialled the 888), is ready to work. You will be able to listen about 20 seconds, then the connection will be cut off, you will hear the busytone. Going on-hook before these 20 seconds are over will also cut off the connection.

| | |
|---|---|
| **Listening what is going on by an external connection** | **# 2N + OIN** |

Call to TINA and after an automatic occupying (the same like for in-dialings, must be switched on see 🕮 47) dial with tone dialing (if your telephone is not able to make tone dialings, you have to use special pocket senders, which can generate these tones). The function is protected against abuses by the OIN.

## 12.9 Operating TINA 206 with only one office line

If TINA 206, that has been build for the operation with two office line, is for any reason operated on only one office line, it is necessary to tell ‘her’ that.

The office line must be linked with the connector for office line 1, the second, seen from the left side, see 🕮 19, otherwise the access is not possible.

| | |
|---|---|
| **TINA 206 connected with only one office line** | **(AD2) + 011** |
| **TINA 206connected with two office lines** | **(AD2) + 012** |

## 12.10 Change the internal tone-dialing into impulse-dialing to an public telephone branch office

If this function is switched on, an internal subscriber gets two short tones or the busy-tone (if the change is not possible at the moment) after having dialled the access dialing 0, 91, 92 (or 90 / 91 / 92 + OIN in user mode).

| | |
|---|---|
| **Dialing change off** | **(AD2) + 13 0** |
| **Dialing change for line No.1 on** | **(AD2) + 13 1** |
| **Dialing change for line No.2 on** | **(AD2) + 13 2** |

# 13 Information dials

By dialing the combination as listed below, you can get information about the current settings of the PABX and the ES, or information about the state of charging counters or charging accounts.

Instructions for the information dialing:

Lift the handset, hearing a lasting tone; dial the 5 (= number for information dial access). Wait for a positive tone. In case of a negative tone, the information dial access is not possible at the moment. Try later, tone explanations, see 🕮 61).

Now you must dial one of the below listed codes.

To get more information, it is not necessary to dial the 5 again. You only have to dial the new figure-pair (example: 5 01 04 15).

**Automatic lifting of office line 1 active? (5) 01**

Positive tone means, that the automatic lifting is active, a negative tone reveals a non-active state.

**Automatic lifting of office line 2 active? (5) 02**

Positive tone means, that the automatic lifting is active, a negative tone reveals a non-active state.

**External ringing operation mode DAY or NIGHT? (5) 03**

Positive tone means, that the automatic DAY-mode is active, a negative tone reveals that the NIGHT-mode is active.

**Melody on? (5) 04**

Positive tone means, that the melody is active, a negative tone reveals a non-active state.

**ES- or user-mode? (5) 05**

Positive tone means, that the ES-mode is active, a negative tone reveals that the user-mode is active.

**Counting down from the charging credit on? (5) 06**

Positive tone means, that the counting down is active, a negative tone reveals a non-active state.

**Impulse- or minute counting? (5) 07**

Positive tone means, that the 16 kHz impulses, a negative tone reveals that the user-mode is active.

**Controlling the voice-module (5) 08**

You will hear the recorded numbers („One, two, three,…“) and, if recorded, other messages in your handset. This works only with the voice module MS 206.

**Both or only one office line working? (5) 09**

Positive tone means, that only one office line is activated, a negative tone reveals that TINA 206 operates with both office lines. Programming, see 🕮 53.

**External ringings for office line 1 on? (5) 1N**

You will hear information (a tone) about the external ringing state (for office line 1) of the ES 2N (N =1 to 6) in external ringings operation-mode

Positive tone means, that the ringing is on (DAY or NIGHT), a negative tone reveals that the ringing is off (DAY or NIGHT).

**External ringings for office line 2 on? (5) 2N**

You will hear information (a tone) about the external ringing state (for office line 2) of the ES 2N (N =1 to 6) in external ringings operation-mode

Positive tone means, that the ringing is on (DAY or NIGHT), a negative tone reveals that the ringing is off (DAY or NIGHT).

**External ringings connected or temporary disconnected? (5) 3N**

Positive tone means, that the ringings are connected, a negative tone reveals a non-connected state. This refers to the settings described on 🕮 33.

On activating the temporary ringing restriction (internal, external or both) the user will be told by five short tones in the handset, which come before the lasting tone.

**Dialing-change activated for line 1? (5) 91**

**Dialing-change activated for line 2? (5) 92**

Positive tone means ‘activated’. The same setting is described on 🕮 33.

**Listening into a room activated? (5) 93**

Positive tone means ‘activated’. The same setting is described on 🕮 54.

**Function ‘flash’ activated for the office line? (5) 94**

Positive tone means ‘activated’.

**Categorisation operation mode DAY or NIGHT? (5) 03**

Positive tone means, that the automatic DAY-mode is active, a negative tone reveals that the NIGHT-mode is active.

**Internal ringings connected or temporary disconnected? (5) 4N**

Positive tone means, that the ringings are connected, a negative tone reveals a non-connected state. This refers to the settings described on 🕮 33.

On activating the temporary ringing restriction (internal, external or both) the user will be told by five short tones in the handset, which come before the lasting tone.

**Internal ringings redirected for in-dialings? (5) 8 N**

You will hear a acoustic information on ES 2N (N=ES No.1..6), that informs you about the state of redirections for internal ringings in case of in-dialings. Positive tone means that redirection is activated. Negative ton means not-redirected.

**Question the ES- or line charging counter state (5) 5N**

You will hear charging counter state of the questioned ES 2N (N=1 to 6) or office line N (N=7 for line 1, N=8 for line 2). Example: When the state of the counter is 0435, the message is „four, three, five“.

This only works with the voice module MS 206.

**Question the user charging counter state (5) 6U**

You will hear charging counter state of the questioned user U (U=1 až 6).

Only in user-mode! This only works with the voice module MS 206.

**Question the ES credit amount (5) 7N**

You will hear charging counter state of the questioned ES 2N (N=1 až 6) in ES-mode.

Only in ES-mode! This only works with the voice module MS 206.

**Question the user credit amount (5) 7U**

You will hear charging counter state of the questioned user U (U=1 až 6) in user-mode.

Only in user-mode! This only works with the voice module MS 206.

# 14 Overview: Used ringing-types and their meaning

## 14.1 Ringings at incoming external connections

Ringings at incoming external connections last for the time the calling subscriber lets ring.

If the automatic lifting is switched on, TINA confines the ringing to 40 seconds.

When redirecting a call without waiting for a connection, the ringing on the ES to which the call has been redirected is confined to 40 seconds, and another 40 seconds back to the original ES.

Long ringing, followed by a pause.



## 14.2 Internal ringings

You will hear this type in case of internal connections or when redirecting an external call.

Two short ringings, followed by a pause.



## 14.3 Ringings from the electronic doorguard

You will hear this type on ES, which have been dialled by the el. doorguard.

Long and short ringing followed by a pause.

## 14.4 Ringing after office line is available again

You will hear this ringing once, at the ES, which has made a reservation for the office line, to remember that the office line is available again.

Three short ringings.

# 15 Tone-signalisation overview and meaning

## 15.1 Internal tone 1

This tone (hearable after lifting the ES), is signalling, that the ES is able to dial impulse- and tone-dials

Lasting tone.



## 15.2 Internal tone 2

You will hear this tone after having lifted the handset or when you go from an external connection to the internal line (for redirecting the connection or questioning back), if it has been possible for the PABX to assign the tone-dialing receiver. If this has not been possible, the ES is without tone; going from an external connection to the internal line will not succeed.

Two repeating, short tones then pause.



## 15.3 Positive tone

This tone is used as announcement when adjusting the ES, and during information dial.

One short and one long tone (only once).



## 15.4 Negative tone

This tone is used as announcement when adjusting the ES, and during information dial.

Four short tones (only once).



## 15.5 Attention tone

This tone calls the attention of external calling subscribers (see 📖 31), and is also needed to ask you to enter the UIN (in user-mode)

Three short tones (only once)

## 15.6 Ringing tone

The calling subscriber will hear this tone during dialing (the same for external and internal connections).

Long tones with a long pause.



## 15.7 Busytone 1

The aimed ES or office line cannot be accessed at the moment because it is occupied or the internal signalisation is turned off.

Repeating short tones.



## 15.8 Busytone 2

It means Invalid or temporary (because of the adjusting) impossible dialing.

Repeating short (shorter than busytone 1) tones.



## 15.9 Charging tone

This tone will be heard when the last five charging credits of the ES (ES-mode with activated counting down of charging units) or user (user mode with activated counting down of charging units) begin to be counted down.

One short tone (only once).

# 16 Operation and programming overview

Explanations: ‘AD’ means ‘access dialing’. ‘OIN’ means ‘owners identification number’. ‘UIN’ means ‘users identification number’.

## 16.1 Basic operation and functions

| | | |
|---|---|---|
| Access to the office line | **0, 90, 91 / 92** | 🕮 30, 31 |
| Dialing to extension stations and groups | **21 až 26; 27, 28, 29** | 🕮 28 |
| Redirecting a conversation (tone dialing) | **R, flash** | 🕮 32 |
| Redirecting a conversation (impulse dialing) | **0** | 🕮 32 |
| Taking over an external call to a not ringing ES | **4** | 🕮 |
| Calling attention to a interest about the office line | **5** | 🕮 31 |
| Request to a ringing after office line becomes available again | **0** | 🕮 31 |
| Access dialing 1 (explanation of the term) | **AD1, 81 + OIN** | 🕮 41 |
| Access dialing 2 (explanation of the term) | **AD2, 82 + OIN** | 🕮 45 |
| Resetting the PABX | **(AD2) + 000** | 🕮 47 |
| Turn off call waiting | **(AD2) + 50N** | 🕮 51 |
| Turn on call waiting | **(AD2) + 51N** | 🕮 51 |
| Adjusting categorsation in DAY-mode | **(AD2) + 030** | |
| Adjusting categorisation in NIGHT-mode | **(AD2) + 031** | |
| Setting TINA 206 to operate only one office line | **(AD2) + 011** | 🕮 53 |
| Setting TINA206 to operate both office lines | **(AD2) + 012** | 🕮 53 |
| Possibility to listen into a room switched off | **(AD2) + 14 0** | |
| Possibility to listen into a room switched on | **(AD2) + 14 1** | |

## 16.2 Adjusting the extension stations (ES)

| | | |
|---|---|---|
| Basic adjusting of ES N (for telephone) | **(AD2) + 20N** | 🕮 47 |
| Adjusting ES N for fax | **(AD2) + 21N** | 🕮 48 |
| Adjusting ES N for modem | **(AD2) + 22N** | 🕮 48 |
| Adjusting ES N for answering machines | **(AD2) + 23N** | 🕮 48 |
| Adjusting ES N for doorguards | **(AD2) + 24N** | 🕮 48 |
| Resetting all settings for group calls | **(AD2) + 80N** | 🕮 52 |
| Dividing into group No. 1; calling from ES | **(AD2) + 81N** | 🕮 52 |

| | | |
|---|---|---|
| Dividing into group No. 2; calling from ES | **(AD2) + 82N** | 📖 52 |
| Dividing into group No. A; calling from doorguard | **(AD2) + 83N** | 📖 52 |
| Dividing into group No. B; calling from doorguard | **(AD2) + 84N** | 📖 52 |
| Turning off autom. occupying of off. line 1 📖 2 | **(AD2) + 110** | 📖 47 |
| Turning on autom. occupying of off. line 1 | **(AD2) + 111** | 📖 47 |
| Turning on autom. occupying of off. line 2 | **(AD2) + 112** | 📖 47 |
| Turning off autom. assigning of the office line | **(AD2) + 60N** | 📖 51 |
| Turning on autom. assigning of the office line | **(AD2) + 61N** | 📖 51 |
| ES 2N uses a flash from 80 to 400 ms | **(AD2) + 06N** | 📖 46 |
| ES 2N uses a flash up to 1000 ms | **(AD2) + 07N** | 📖 46 |
| Redirect. the ring. in case of a in-dial. from the of. line | **(AD2)+ 9 N M Y** | |
| Listening-ES (do not go off-hook after having dialled) | **888** | |

## 16.3 Ringing

| | | |
|---|---|---|
| Removing temporary ringing restrictions | **8 80** | 📖 33 |
| Temporary restriction of external ringings | **8 81** | 📖 33 |
| Temporary restriction of internal ringings | **8 82** | 📖 33 |
| Setting of external ringing to DAY mode | **88 3** | 📖 |
| Setting of external ringing to NIGHT mode | **88 4** | |
| Disconnecting external ringings from ES | **(AD2) + 70N** | 📖 51 |
| Ringing of line 1 in DAY-mode turned on | **(AD2) + 71N** | 📖 51 |
| Ringing of line 2 in DAY-mode turned on | **(AD2) + 72N** | 📖 51 |
| Ringing of lines 1 and 2 in DAY-mode turned on | **(AD2) + 73N** | 📖 51 |
| Ringing of line 1 in NIGHT-mode turned on | **(AD2) + 74N** | 📖 51 |
| Ringing of line 1 in NIGHT-mode turned on | **(AD2) + 75N** | 📖 51 |
| Ringing of line 1 and 2 in NIGHT-mode turned on | **(AD2) + 76N** | 📖 51 |
| X ringing delays at ES N | **(AD2) + 90NX** | 📖 52 |

## 16.4 Operating the charge

| | | |
|---|---|---|
| Turning off the charge credit | **(AD1) + 00** | 📖 43 |
| Turning on the charge credit | **(AD1) + 01** | 📖 43 |
| Device counts 16 kHz charge impulses | **(AD1) + 02** | 📖 43 |
| Device counts minutes | **(AD1) + 03** | 📖 43 |

| | | |
|---|---|---|
| Adjusting the charge credit | **(AD1) + 3N XXXX** | 🕮 43 |
| Supplementing charge credits | **(AD1) + 4N XXXX** | 🕮 43 |
| Resetting the line/ES counter | **(AD1) + 1N** | 🕮 43 |
| Resetting the user counter | **(AD1) + 2U** | 🕮 43 |

## 16.5 Adjusting the pseudocharging

| | | |
|---|---|---|
| PABX works with pseudocharging | **(AD1) + 03** | 🕮 38 |
| Time pulse for local calls in minutes | **(AD1) + 60 mm** | 🕮 38 |
| Time pulse for non-local calls in seconds | **(AD1) + 61 ss** | 🕮 38 |
| Time pulse for toll calls in seconds | **(AD1) + 62 ss** | 🕮 38 |

## 16.6 Confining the office line access

| | | |
|---|---|---|
| Resetting the UIN | **(AD2) + 05U** | 🕮 46 |
| Forbid all external calls | **(AD2) + 30N** | 🕮 48 |
| Allow only local calls on the ES | **(AD2) + 31N** | 🕮 48 |
| Forbid calls to foreign countries on the ES | **(AD2) + 32N** | 🕮 48 |
| Using ES without any restrictions | **(AD2) + 33N** | 🕮 48 |
| Forbidden prefix plus code numbers 1and 2 possible | **(AD2) + 34N** | 🕮 48 |
| Dial. forbidden plus code No. 1 not pos. for ES | **(AD2) + 35N** | 🕮 48 |
| Dial. forbidden plus code No. 2 not pos. for ES | **(AD2) + 36N** | 🕮 48 |
| Only internal calls allowed for user x | **(AD2) + 40U** | 🕮 50 |
| Only local calls allowed for user x | **(AD2) + 41U** | 🕮 50 |
| Calls to foreign countries forbidden for user x | **(AD2) + 42U** | 🕮 50 |
| No restrictions for user x | **(AD2) + 43U** | 🕮 50 |
| Forbidden plus code No. 1 and 2 possible for user | **(AD2) + 44U** | 🕮 50 |
| Plus code 1 not dialable | **(AD2) + 45U** | 🕮 50 |
| Plus code 2 not dialable | **(AD2) + 46U** | 🕮 50 |
| Adjusting forbidden plus code No.1 to XXXX | **(AD1) + 51 XXXX** | 🕮 45 |
| Adjusting forbidden plus code No. 2 to XXXX | **(AD1) + 52 XXXX** | 🕮 45 |
| ES N has no office line access in DAY-mode | **(AD2) + 62N** | 🕮 |
| ES N has only office line No.1 access in DAY-mode | **(AD2) + 63N** | 🕮 |
| ES N has only office line No. 2 access in DAY-mode | **(AD2) + 64N** | |
| ES N has office line access in DAY-mode | **(AD2) + 65N** | |

| | | |
|---|---|---|
| ES N has no office line access in NIGHT-mode | **(AD2) + 66N** | 🕮 |
| ES N has only office line No. 1 access in NIGHT-mode | **(AD2) + 67N** | 🕮 |
| ES N has only office line No. 2 access in NIGHT-mode | **(AD2) + 68N** | 🕮 |
| ES N has office line access in NIGHT-mode | **(AD2) + 69N** | 🕮 |

## 16.7 General programmable functions

| | | |
|---|---|---|
| Turn off melody (both office lines) | **(AD2) + 120** | 🕮 47 |
| Turn on melody (both office lines) | **(AD2) + 121** | 🕮 47 |
| Adjusting to extension station operation mode | **(AD2) + 100** | 🕮 46 |
| Adjusting the PABX to user mode | **(AD2) + 101** | 🕮 47 |
| Delay between internal ringings < 7 seconds | **(AD2) + 040** | 🕮 46 |
| Delay > 7 seconds, max. 12 seconds | **(AD2) + 041** | 🕮 46 |
| Recording numbers on optional voice module | **(AD1) + 04** | 🕮 44 |
| Recording of the intro. announce and aiding texts | **(AD1) + 05** | 🕮 44 |
| Adjusting of the awaking-time for ES N | **(AD1) + 7 N hh mm** | 🕮 45 |
| Removing the awaking-function | **(AD1) + 7 N 99 99** | 🕮 45 |
| Switching off automatic lifting of office line 1 and 2 | **(AD2) + 110** | 🕮 47 |
| Switching on automatic lifting of office line 1 | **(AD2) + 111** | 🕮 47 |
| Switching on automatic lifting of office line 2 | **(AD2) + 112** | 🕮 47 |

## 16.8 Other functions

| | | |
|---|---|---|
| Dialing to ES or groups from the doorguard | **31 až 36; 37, 38, 39** | 🕮 48 |
| Changing the owner ident number (OIN) | **83 XXXX YYYY 99** | 🕮 53 |
| Changing the user ident number (UIN) | **84 XXXX YYYY 99** | 🕮 53 |
| Short-dials (restrictions valid, ES-mode) | **6X** | 🕮 |
| Short-dials (restrictions valid, user-mode) | **6X UUUU** | 🕮 |
| Short-dials (restrictions not valid, ES-mode) | **7X** | 🕮 |
| Short-dials (restrictions not valid, user-mode) | **7X UUUU** | 🕮 |

# 17 Information-dial overview

Information dials are described starting 📖 57.

| | |
|---|---|
| Internal ringing of ES N from line 1 linked? | **(5) 1N** |
| Internal ringing of ES N from line 2 linked? | **(5) 2N** |
| Ext. ring. of ES N temporary not linked ? | **(5) 3N** |
| Int. ring. of ES N temporary not linked ? | **(5) 4N** |
| Ringing on ES N redirected | **(5) 8N** |
| Announcing the value of the charge-imp.-count. of ES or line | **(5) 5N** |
| Announcing the value of the charge-impulse-count. of the user | **(5) 6U** |
| Announcing the value of the account of available ES impulses | **(5) 7N** |
| Announcing the value of the account of available user impulses | **(5) 7U** |
| Automatic picking up of line 1 active? | **(5) 01** |
| Automatic picking up of line 2 active? | **(5) 02** |
| PABX is in DAY- or NIGHT-mode for external ringing? | **(5) 03** |
| Melody on? | **(5) 04** |
| Is it extension station or user order? | **(5) 05** |
| Counting the charge accounts? | **(5) 06** |
| Minutes or impulses counted? | **(5) 07** |
| Voice-module check | **(5) 08** |
| Dialing-change activated for line 1? | **(5) 91** |
| Dialing-change activated for line 2? | **(5) 92** |
| Listening into a room activated? | **(5) 93** |
| Function ‘flash’ activated for the office line? | **(5) 94** |
| PABX is in DAY- or NIGHT-mode for access to line? | **(5) 95** |

# 18 Programming examples

## 18.1 Using TINA without any programming

In many cases, especially when using the PABX for private households, it is more pleasant to start using TINA immediately after the installation without any programming.

It is easy to reach this basic state even after not succeeded or without any programming (see 🕮 46).

The basic setting will surely satisfy those wishes, which lead you to the decision to buy such an device.

That means: It is possible to connect several telephones, taking over connections from any of them, without being eavesdropped on another ES. You also can redirect connections to the ES you wish. The very basic functions of the PABX are described within a few pages, staring 🕮 28.

The greatest problem of users, who did not use to telephone by a PABX, is, to remember that it is necessary to dial first the access dialing, then after hearing the proper tone the subscriber's number. Descriptions see 🕮 30.

But it would be a pity not to use all the useful functions, for example by following this example:

## 18.2 Household, variant 1

The programming example starts from not having changed the owners' identification number (OIN), but that it is still 8888.

The OIN has been also introduced to protect the PABX against not intended programmings when dialing numbers, that are accidental the programming numbers.

After having switched the PABX to programming mode, it is necessary to dial 8 2 8888 after having lifted the handset (see 🕮 45 and 41). Only then the next dialled numbers mean a programming.

It is extremely improbable, that the user will enter by chance this combination after having lifted the handset.

In addition, this can only happen if the user forgets to dial the office line access code (normally the 0) and starts to dial any long number.

Properties marked with ü are default settings, and do not need to be programmed.

If the PABX setting is not exactly known, it is necessary to reset the device by dialing 8 2 8888 000, see 🕮 46.

A need for programming is marked ➔, programming by itself with (, the programming block begins with lifting the handset and ends with going on-hook again.

One office line

Four ES (21 to 24), which can be connected with telephones, are standing in different rooms.

No fax, no modem, no in-dialing.

Melody is on when redirecting a call.

ES-mode, all ES except No. 4 (programming of this ES below) have no restrictions (long-distance-calls possible).

ES No. 5 is linked with an answering machine.

Even if the ES is adjusted as answering machine-ES a telephone can be connected without any problems. So this ES is not lost for a telephone connection. Adjusting this ES as answering machine-ES has the only advantage, that conversations can be redirected to any other ES by dialing the 4. So telephone calls can be filtered. If the answering machine is equipped with a monitoring loudspeaker, you can switch it on, wait until you know who is calling and then decide whether to take over the conversation or not.

Adjusting an ES as answering machine-ES: 8 2 8888 23 5, see 🕮 48.

➔ Answering machine has adjusted a delay of four ringing intervals, so that it can be permanently on.

Adjusting the delay: 8 2 8888 90 5 4, see 🕮 52.

➔ The bedroom (ES No. 22) has turned off external ringings, so that they do not disturb, conversations, which ringings can be heard from other rooms, can be easily taken over by dialing the 4.

Turn off external ringings: 8 2 8888 70 2, see 🕮 51.

➔ The sixth ES (No. 26) is linked with the electronic doorguard.

Adjusting the ES for the doorguard: 8 2 8888 24 6, see 🕮 48.

➔ The telephone on the toilet (ES No. 24) the signalisation into internal calls in case of an incoming external connection (= knocking) is turned off, the access to the office line is only possible for local calls and internal ringings are turned off.

Lift the handset, dial 8 2 8888 50 4 31 4 go on-hook, lift the handset again, dial 8 81, go on-hook again, see 🕮 51, 48 a 33.

## 18.3 Household, variant 2

The programming examples start from having changed the OIN. For example to 8501 see the description on 🕮 53. Vin this case only the owner is able to make changes and program the PABX and assign charging credits to the single users. The term owner and OIN are explained on 🕮 15.

Properties marked with ü are default settings, and do not need to be programmed.

If the PABX setting is not exactly known, it is necessary to reset the device by dialing 8 2 8501 000, see 🕮 46.

A need for programming is marked ➔, programming by itself with (, the programming block begins with lifting the handset and ends with going on-hook again.

One office line

Four ES (21 to 24), which can be connected with telephones, standing in different rooms.

Melody on when redirecting a call.

Signalisation into an internal call in case of an incoming external call on.

The fifth ES is linked with a telephone an answering machine and a fax (the study-room). It is necessary to accept external connections, that is why no ringing delay is adjusted (as in the example above). The answering machine is off when someone is in the room, else always on. The fax is always activated, because the automatic lifting is actived.

Switching on automatic lifting of the office line, adjusting the ES as fax-ES, assigning as group A for the electronic doorguard.

8 2 4711 111 21 5 83 5, see 🕮 51, 48, 52.

In-dialing DISA

The above-listed and programmed turning on automatic lifting of the office line is necessary for the proper functionality of the in-dialing, further information, see 🕮 36.

➔ The bedroom (ES No. 22) has turned off external ringings, so that they do not disturb, conversations, which ringings can be heard from other rooms, can be easily taken over by dialing the 4.

Turning off external ringings: 8 2 4711 70 3, see 🕮 51.

➔ The sixth ES (No. 26) is linked with the electronic doorguard.

Adjusting the ES for the doorguard: 8 2 8501 24 6, see 🕮 48.

The user mode makes it possible to control the telephoning of your children, in case not available charging impulses, use the pseudocharging as charging units. Explanation of the term ‘charging unit’, see 🕮 16, charging information, see 🕮 37.

Switching to user-mode, charging units are minutes, calling restriction for the daughter and the mother-in-law (only local calls allowed), see 🕮 47, 50, 🕮 43.

8 2 4711 101 03 41 3 41 4

Turn on counting down, fill up the credits (like listed below), see 🕮 43

8 1 4711 01 3 1 9999 3 2 9999 3 3 0100 3 4 0020

Putting ES No. 22 and 24 into group 1, so that the daughter will be reachable at anytime by in-dialing the 28.

8 1 4711 812 814, see 🕮 52

| ES | Room | Conversation group | Door-guard roup | User No. | User | Restrictions | Credit |
|---|---|---|---|---|---|---|---|
| 21 | Corridor | None | A | 1 | Father | None | 9999 |
| 22 | Sitting room | 1 | A | 2 | Mother | None | 9999 |
| 23 | Bedroom | None | None | 3 | Daughter | Only local calls | 0100 |
| 24 | Childrens’ r. | 1 | B | 4 | Son | Only local | 0020 |

| | | | | | | calls | |
|---|---|---|---|---|---|---|---|
| 25 | Study room | None | A | 5 | | | |
| 26 | Doorguard | None | None | 6 | | | |

# 19 First aid for problems and damages

Most problems will surely be caused by wrong programming and adjusting of the PABX. The best way to get out of this situation is to reset the PABX completely (see 🕮 46) and to begin a new programming.

Having still problems, you will have to make a completely resetting, by pulling the mains power supply plug and put it in the socket again.

Having still not managed to get rid of the problems it will be likely necessary to send the device back to the producer and have it repaired.

## 19.1 Frequent problems with the PABX

You still have connected only one office line to your TINA 206 and it is not possible to receive external calls or to access the office line.

Please make sure, that the first office line is really in the proper connector. The right one is mounted on the component board; it is the second one (seen from the left side), right beside the screw clamp (see picture 🕮 19).

Office line access is not possible.

Fill up the charging credits (if their counting down is turned on, 🕮 43), make sure, that the ES (see 🕮 48) or the user (see 🕮 50) has assigned enough access rights.

The number 0XXX is not restricted, although the restriction is on.

Probably the 0XXX is not adjusted as forbidden prefix plus code number AD1 51N and 52N (see 🕮 45) or the restriction is only turned on for the prefix plus code number 2.

The ES does not ring at internal/external connections, but you can hear a tone through the handset.

Make sure that the ringing is not restricted during the DAY-/NIGHT-mode (use the information dials, see 🕮 57). Adjust the right value with AD2 70-76N (see 🕮 51) or dial the 880 on the ES (see 🕮 33).

If that does not help, control whether another order has been accidentally set, or whether the ES is not defined as fax- or modem-ES (see 🕮 47).

The voice messaging does not work when you question the counter- and account-states.

The voice-module is not built in, or the numbers are not recorded (see 🕮 44).

The PABX does not count the charges properly.

Make sure, that the public telephone branch office sends the 16 kHz charging impulses to your TINA. This is not an automatical function, you first have to order these charging impulses, and you have to pay for them. Make the information dial 507 to be sure not to count your charges in minutes.

Damages during internal fax- or modem transmissions.

In case of other internal conversations than telephones (e.g. fax, modem) turn of the knocking. It might lead to mistakes during the internal data transmission.

## 19.2 Mains failure

In case of a mains failure the ES No. 21 is directly connected to the office line1, so that it is not necessary to dial the access-number. This ES takes over all incoming and out-going connection, the other ES do not work any more.

The second office line (TINA 206) is not assessable.

The already programmed data will not get lost in case of a mains failure.

## 19.3 Possibility to have your TINA distance-set

The producer and authorised dealer can, if you wish so, with your active co-operation distance-reset and -set the PABX again.

The producer and authorised dealers have the right to demand a small payment for this service.

# 20 Technical data

| | |
|---|---|
| Power supply | Power supply device NT 06 - 230 V / 50 Hz 4,5 VA; 5 V=, 24 V=, 55 V AC |
| Tone-frequency | 425 Hz +- 5% |
| Ringing-voltage | Approx. 50 V / 50 Hz |
| Ringing-evaluation | 20 Hz..60 Hz / 15..100 Veff |
| Terminal equipment | a/b interface with impulse- or tone-dialing and flash |
| ES-voltage | Approx. 24 V (ES is on-hook) |
| Loop-current | Approx. 25 mA |
| Evaluated ringings | Impulse or tone |
| Internal ringings | The dialing of the terminal equipment is copied (impulse dialing), or redirected right tothe public tel. branch office (tone dialing). |
| Range | 2 x 20 Ω, corresponding to a cable length of 200 m with a diameter of 0,4 mm or 300 m with 0,6 mm. |
| Transfer speed modem 33,6 kBaud | |
| Environment | 0 to + 40 °C, indoor, without condensating liquid, |
| | Store from -20 to +70 °C |
| Dimensions | Approx. 142 x 200 x 50 mm |
| | Mains power supply: approx. 65 x82 x 80 mm |
| Weight | Approx. 0,75 kg (including the mains power supply) |

## 20.1 Included accessories for TINA 106/206

Mains power supply device, cable length 1,5 m.

Cable(s) with connectors type RJ11 6/4 for connecting to the office line (length 1 m).

This operational manual.

## 20.2 Not included accessories

Voice-module MS 206 - for announcing the states of charging counters and accounts (📖 39).

Conversation pursuing module MEH 206 for collecting all information and operation data with a serial communication and evaluation-software on a PC (🕮 39).

Electronic doorguard VR 206 - interface a/b, communication to both sides, programmable dialing from every single doorbell-button, closing the door with a magnet, operation from a telephone (🕮 27).

# 21 Other own products and services

## 21.1 Installing your TINA

In Cupertino with experienced installation companies we will install and get your TINA and other devices to work.

## 21.2 LINE DOG - The watch-dog for your telephone line

Your telephone line will be protected day and night. The possibility that someone makes an illegal connection to your telephone line and starts to telephone at your bill is now out of question.

LINE DOG barks:: Acoustic and optic warnings, if someone makes an illegal connection to your telephone line or even interrupts it.

LINE DOG bytes: It disturbs the tone dialings of the ‘pirate’ with high effectivity, and makes it impossible to him to telephone at your bill.

Protect your line! The installation is no problem. Everyone is authorised to connect his own LINE DOG.

## 21.3 UES 10 - A protection against high voltages

A favourable, officially licensed protection for devices like fax, modem, PC, telephone, PABX … Effective safety against high voltages in the mains and in the telephone line. The installation is no problem. Just put it in the proper sockets! A version with screw-clamps is also available.

## 21.4 INFOTEL 2 - Automatic dialing and announcing device

This device announces emergency-, damage- or alarm-states in the on the telephone line.

Any predefined and digital recorded message can be send because of a certain event (connecting or disconnecting a contact, pushing a button or wireless) can be sent on the office- or internal line to up to four programmed telephone numbers.

Linked with a security system, or as small alarm system INFOTEL 2 is a highly effective professional device for announcing damages (escaping gas, mains failure in cooling systems, a server failure…) or announcing intruders into a restricted area and so on.

## 21.5 INFOTEL 3 - Automatic dialing and announcing device

The functions are similar to those of INFOTEL 2. INFOTEL 3 has four independent inputs to which different message-blocks can be assigned. It has the possibility of distance-questioning the states of these inputs, it can be wireless operated (equipped with

two independent relays), it watches and announces mains failures. A communication and monitoring of the watched room is also possible.

## 21.6 ASIM 10 - Simulates two office line

ASIM 10 is a device for testing and redirecting of telephones, faxes, answering machines and other messaging terminal equipment.

ASIM is a compact device operated by a microprocessor equipped with a alphanumerical LCD-display. It makes possible to check all terminal equipment with a serial interface a/b, e.g. telephones, faxes, answering machines, PABX, automatic fax switches, modems (generates CNG tones with 1100 Hz and 1300 Hz), charging impulse counters (generates charging impulses with 16 kHz), automatic calling devices and even pocket-tone-dial-senders.

All important parameters and values (signalisation, number of counted intervals, lifting the line, making the line available again, dialing type (tone or impulse), dialled number, flash length at tone dialings) are pursued and displayed by ASIM.

ASIM is also good for presentations of telecommunication devices during sellings, fairs or for business-travellers, because it gives everywhere the possibility to have gratis two ‘real’ office lines, so that it is possible to build a connection and communicate the same way as with a real telephone line.

The operation is because of the alphanumerical display extremely easy. Only two buttons operate the device! Even when ASIM is used only by time or the manual has not been read, the operation is no problem.

Both independent interfaces a/b are equipped with connectors, type RJ11 (Western), parallel linked to every connector are four 4 mm inputs to measure, or for specific adapters.

## 21.7 Development and production of custom products

Our ‘Custom-shop’ for realising own products not only in the telecommunication branch is always to your disposition. We offer:

A skilled and dynamic team of soft- and hardware developers.

A quick, and favourable production with high quality standards.

Thanks to a subsidiary in Germany we have access to a wide technological and buying infrastructure.

Our firm delivers products in great series also to foreign countries, which there are sold under labels of renommied worldfamous company. During our existence (found in 1992) we have reached it to be known as confident partner among our customers.

# 22 Certification and official licence

# 23 Warranty

Serial number, date of purchase, stamp, signature: