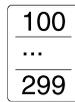


Operator's Manual
for Electronic Telephone Systems
ETS-4308 I, ETS-2204 I, ETS-2206 I
and ETS-2106 I Revision 2

Pictograms that are used



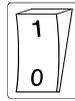
Replace the handset.



Punch in a number in the specified range (in this case, a three-digit number between 100 and 299).



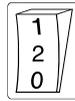
Pick up the handset.



Switch a function on and off with a switch (1: switch on/0: switch off).



Pick up the handset of the programming extension (in default setting 31).



Switch with three status conditions



An extension is ringing.



Day/night switching (1: night on/0: day on)



You hear a tone that is described in the respective chapter.



Punch in the password, e.g. the secret password (in the default setting, 1111)



Make a call. You first hear for a short time the ringing tone.



Choose the number of the relay (differs depending on the PBX).



Punch in the internal calling number or the extension number (differs depending on the PBX).



Punch in the number of the call group (1-8).



Punch in the external calling number or the one that you can dial via the exchange.



Choose the number of the bell signal in the case of code calling (1-5).



Punch in the specified digit (e.g. 1).



Press the enquiry key (with DTMF telephones, the flash key/with ISDN telephones the enquiry key or a menu item/omitted with pulse dialling telephones).



Signs indicating information or a warning

Description

By selecting an AUERSWALD PBX, you have chosen a telecommunications system that allows you to exploit the features of Euro-ISDN using your existing telephones, fax machines, answering machines and other equipment.

This Operator's Manual will introduce you to day-to-day use of your PBX. It shows in detail how to make phone calls, to use the abbreviated dialling memory, and to operate the functions like call transfer, pick-up and query, as well as the added features like alternation and conference switching. To be able to operate these functions, you should, if possible, already have connected all your telephones and other equipment.

In addition, you will find here a few programming functions (e.g. call forwarding, room monitoring and immediate connection without dialling). Some users may need these functions in everyday operation of their equipment. Programming steps, which are retained even if there is a power outage, are indicated by the initial password that you have to enter.

More detailed programming steps are described in the Installation and Configuration Manual.

Due to the wide range of functions, you should use the Operator's Manual as a work of reference.

Should your telephone system not work as expected, your first step should be to consult the self-help information in Chapter *Troubleshooting* on page B-29.



If you haven't yet installed your system, first read the enclosed Installation and Configuration Manual. This will tell you how to set up your PBX on the existing ISDN connection, how to tell the system your calling numbers and how to set up ringing (call distribution).

You have to note some differences that depend on which of the PBXs that are described here you are using. Information regarding ISDN telephones, for example, refers only to PBXs that have internal S₀ ports. For more details on this topic, refer to the overview of features on the first pages of the Installation and Configuration Manual.

For answers to general questions on operation and programming, refer to Page B-5.

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1 Operation

Carry out the actions that are depicted as symbols in left-to-right order. Symbols that are located under one another are available as alternatives. Change these symbols for the ones that are directly above them in the first row, depending on what you want to set or who you want to call. The symbols are described in more detail on the fold-out cover flap.

In addition, you will find here descriptions of a few programming functions that are indicated by the initial password that you have to enter. Depending on the instruction, lift the handset on the relevant telephone set or on the programming telephone. After entering the initiating digit – a 7 or an 8 – and the valid password, the system outputs an acknowledgement tone (a pulsating tone). After you enter the rest of the programming digits, you hear another acknowledgement tone. You now have the option of ending programming by replacing the handset or immediately entering another sequence of programming digits (omit the initiating digit and the password), assuming that this sequence is initiated with the same digit and password. If you hear an engaged tone, you have made a mistake (entered the wrong digit or similar). Replace the handset and repeat the programming step.

 To be able to carry out programming, the programming switch in the system on the PCB must be in the “erlaubt” (allowed) setting (Chapter *First Use* on page I-26 in the Installation and Configuration Manual).

1.1 Enquiry key on different telephones

Except for the ETS-2106 I Rev. 2, you can connect to your PBX ISDN telephones as well as analog pulse dialling and DTMF ones. As a result, there are several differences in operation.

1.1.1 DTMF and pulse dialling telephones

If you are already involved in a call with another (internal or external) party, on a DTMF telephone you must first press the Flash key ( key, signal key) before punching in a digit for transferring the call. Pulse dialling telephone sets do not have a Flash key and they do not need them. This means that if you have a pulse dialling telephone set connected to your PBX, you do not need to press the Flash key. Any deviations with pulse dialling telephones are shown in square brackets ([]).

 If you have problems with the Flash key on your telephone, refer to Chapter *Flash Time of DTMF Telephone Sets* on page I-27 in the Installation and Configuration Manual.

1.1.2 ISDN telephones

There are wide variations in the operation of ISDN telephones. With some of them, you use function keys to operate them, whereas others have menu-driven operator guidance, i.e. prompts are displayed on your telephone set that tell you which button to press, for example. You normally use an  key, for example, to initiate a query. In a few cases, this key is also referred to as the hold key. On some ISDN telephones, the query is menu-driven. You end the query by pressing what is known as the cut-off key. In some cases, the system also prompts you in a menu.

1.2 Making a call (internally and externally)

Making an external call:



Internal dial tone



Access digit



External dial tone



External calling number



Call

Making an Internal call:



Internal dial tone



Internal calling number e.g. 33



Call

 **When making an external call on the direct external telephone** → omit the access digit.

When making an internal call on the direct external telephone → punch in a [*] before the internal calling number (see Chapter *Direct External Telephone* on page I-43 in the Installation and Configuration Manual).

The designations of the **extension terminals** correspond to the internal calling numbers.

1.3 Taking calls (when the telephone rings)

Taking a call:



Ringing

1 long tone: external
3 short tones: internal



Call

1.4 Punch in abbreviated dialling numbers (simplified dialling)

Making a call using abbreviated dialling:



Internal dial tone



Number of abbreviated dialling memory



Call

 **Storing abbreviated dialling numbers** → Chapter *Entering Abbreviated Dialling Numbers* on page I-46 in the Installation and Configuration Manual.

Abbreviated dialling at the **direct external telephone** → punch in a [*] before the abbreviated dialling number (see Chapter *Direct External Telephone* on page I-43 in the Installation and Configuration Manual).

Abbreviated dialling with **query** not possible.

1.5 Query (second call)

If you want to ask somebody something during an ongoing conversation without ending it, you can use the query function. The ongoing conversation is interrupted to call another party.

Query:



Call (no. 1)



Omit with pulse dialling



Internal calling number e.g. 33



Query call (no. 2)

or



Access digit and external calling number

or



Door terminal for intercom

End query and continue 1st call:



Query call (no. 2)



[Omit with pulse dialling]



Call (no. 1)

Lightbulb icon: **Current calling partner hangs up** → you are automatically back in the first conversation [with some ISDN telephones, you must also press the enquiry key to fetch the other party from the background].

The calling partner in the background hangs up → the query conversation becomes a normal conversation.

You replace the handset → both calling partners are transferred (see Chapter *Transferring a Conversation (from a Query Conversation)* on page B-9 or Chapter *External call to external extension* on page B-9).

The party that you called second **does not respond** → punching in **[R] [8]** returns you to the first conversation [**With ISDN:** usually the cut-off key/**with pulse dialling:** omit the **[R]**].

Instead of the ringing tone, the system issues an engaged tone for 2 seconds and returns to the first conversation [**With ISDN:** you usually need the cut-off key] → Called party is **engaged** or doesn't have an **outgoing access** that may be necessary.

When querying a door extension, **door opening** is not possible with ISDN telephones.

A wide range of options can result from a query conversation → **alternation, conference, transfer** (see the next few sections).

After punching in **[R]** you can also initiate a **group call** (see Chapter *Initiating a group call (calling several people at the same time)* on page B-12) or a **code call** (see Chapter *Initiating a code call (calling one person at several telephones)* on page B-12).

1.6 Alternation (from a query conversation)

Your PBX gives you the option of speaking alternately to two parties. For alternation with two external parties, you normally need the support of the exchange (alternation (HOLD) ISDN feature). You can, however, also carry out alternation without the exchange, since the PBX supports alternation via the second B channel.

From the query conversation to alternation:



Query conversation
(no. 2)



[Omit with
pulse dialing]



Conversation
(No. 1)



[Omit with
pulse dialing]



Query conversation
(no. 2)



Transferring a call from the alternation status to a fourth party is not possible. You must first end the conversation with one of the two calling partners.

Ending → Same as query conversation: by punching in **R 8** or by one of the calling partners replacing the handset. If you replace the handset, the other two parties are connected (see Chapter *Transferring a Conversation (from a Query Conversation)* on page B-9 or Chapter *External call to external extension* on page B-9).

1.7 Conference (from query conversation)

Your PBX gives you the option of speaking to two parties at the same time. For a conference with two external parties, you normally need the support of the exchange (three-party conference call (3PTY) ISDN feature). To save the additional charges that may be involved, the PBX supports conferences via the second B channel.

From the query conversation to the conference:



Query conversation (no. 2)



[Omit with pulse dialing]



Conference



Transferring from a conference to a fourth party is not possible. You must first end the conversation with one of the two calling partners.

Ending → Same as query conversation: by one of the calling partners replacing the handset. If you replace the handset, the other two parties are connected (see Chapter *Transferring a Conversation (from a Query Conversation)* on page B-9 or Chapter *External call to external extension* on page B-9).

A conference is not possible with a door extension.

If a **hands-free telephone set** is involved in a conference with three internal extensions, you may hear echoes or whistling in the line.

1. 8 Transferring a Conversation (from a Query Conversation)

Transferring from a query conversation:



Query conversation (no. 2)



Replace the handset – the other two parties are connected

💡 Transferring an external conversation to another external extension → On your own telephone set, either set an appropriate authorization (*user program*) or initiate one of the two external conversations by punching in **[6][7]** and the access digit **[0]** (Chapter *External call to external extension* on page B-9).

With a very few ISDN telephones, **after you replace the handset** → your telephone rings and you are connected again with your first calling partner.

You **cannot** transfer a **door extension**.

1. 9 Transferring a conversation (exchange without query)

Using this function, you can pass on an external conversation to another internal party without announcing the conversation to him/her.

Transferring a conversation without previously announcing it:



External conversation



[Omit with pulse dialling]



Internal calling number e.g. 33



Replace the handset – the system continues to call the internal party – if he or she lifts the handset, they are connected with the external party.

💡 The called party does not lift the handset → after 60 seconds, the system returns the call to your telephone (your telephone rings). If you still haven't lifted the handset after another 60 seconds, the conversation is separated. If your telephone is engaged in the meantime, the system interrupts the procedure after the first 60 seconds have expired and the external conversation is separated.

The system issues the engaged tone for 2 seconds and returns you to the first conversation **[With ISDN: you usually need the cut-off key]** → The called party is **engaged** or doesn't have an **outgoing access** that may be necessary.

1. 10 External call to external extension

If you want to transfer an external conversation to another external party, you must either set an appropriate authorization (*user program*) or initiate one of the external conversations by punching in **[6][7]**. If you initiated an external conversation by punching in **[6][7]**, the system remembers this status until you replace the handset. This means that you can make a variety of other query conversations until two external parties have been transferred.

Carrying out transfer of external call to external extension:



1st external conversation



[Omit with pulse dialling]



Access digit and external calling number



2nd external conversation



Replace the handset – the other two parties are connected

or



Number of abbreviated dialling memory

Lightbulb icon: If you initiated the **first external conversation** by punching in **[6 7]** and the access digit **[0]**, you only need to punch in the access digit **[0]** to initiate the query conversation.

Directed S₀ port (with ETS-4308 I with two external S₀ ports only) with **[6 7 9 1]** or **[6 7 9 2]**.

You are **charged** for the transferred conversation.

A conversation that is transferred in this way may **last a maximum of 30 minutes**. This is for safety reasons, since if you transfer by mistake the time announcement and the weather forecast, for example, this could lead to an infinitely long conversation.

1. 11 Carrying out pick-up (with calls to another telephone)

When you hear a telephone ring and you want to take the call for a party who isn't in the office, for example, you should use the pick-up function. This allows you to fetch the call to your own extension.

If you carry out undirected pick-up, you fetch the call from any telephone that happens to be ringing. If several telephones are ringing, and you want to take an external call, you should use external pick-up. If several telephones are ringing, and you want to take the call from a specific telephone, use directed pick-up.

Carrying out pick-up:



Remote telephone



Own telephone



Internal dial tone



Punch in a 6 and the internal calling number of the ringing telephone e.g. 33 for directed pick-up



Call

or



For external pick-up

or



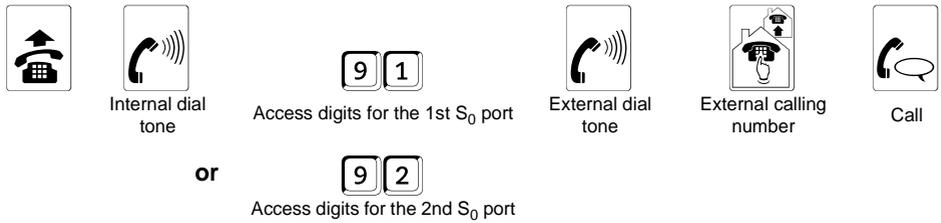
For undirected pick-up

Lightbulb icon: **With engaged tone on external pick-up** → necessary outgoing access not available.

1. 12 Using a directed S₀ port (with ETS-4308 I with two external S₀ ports only)

If you are using your PBX in a two-family house, you can use the following function to settle the charges separately. Both families initiate external calls only by means of the S₀ port that they pay for. Incoming calls, on the other hand, arrive on the line that is free at any one time to make possible higher availability.

Selectively making calls via an S₀ port:



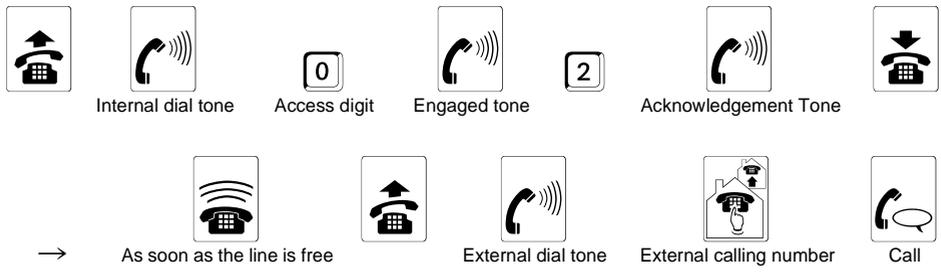
Engaged tone → the selected S₀ port is engaged or the necessary outgoing access is not available

If you **only ever** want to access one external S₀ port from your telephone, **do not set outgoing access** on this telephone for the other S₀ port. You then only need to punch in the access digit **0**.

1. 13 Reserving the line for the next external call

If all the lines (1st and 2nd B channels of the available external S₀ ports) are engaged, you hear the engaged tone after punching in the access digit. You can now reserve a line so that the PBX informs you immediately when one is free.

Reserving the line for an external call



Punch in the abbreviated dialling number → After lifting the handset of the ringing telephone, press the ***** key or replace the handset for at least one second if there is no ***** key on your phone or it is not working (pulse dialling telephones/many ISDN telephones). With ISDN telephones, you cannot dial after lifting the handset of the ringing telephone → replace the handset and then lift it immediately – now dial again (including the access digit!)

1. 14 Make a private external conversation

Each party has his or her own personal password and a special private outgoing access that you can set independently of the normal (business) access. When you initiate private calls

in this way, it is possible to record charges and call data separately from normal (business) recording.

To make a private external call, use the normal access digit and the calling number or an abbreviated dialling number and just punch in before them the following sequence of digits: **9 0** and the private password. As-delivered, the private password is set with extension 31 to 3131 with extension 32 to 3232,... etc. Assuming that you want to make a call from extension 31 to somebody whose calling number is „0815 4711, you would punch in **9 0 3 1 3 1 0 0 8 1 5 4 7 1 1**.

Making a private call



Internal dial tone



Private password
e.g. 3232



Access digit and external calling number



Private call



or

Number of abbreviated dialling memory



Outgoing access is necessary for private calls.

Shorter dialling → shorten or even delete your password (see Chapter *Changing the Private Password* on page I-72 in the Installation and Configuration Manual). You then initiate a private call by simply punching in **9 0**, the access digit **0** and the calling number.

You could, for example, initiate **selectively a private external call via the 2nd S₀ port (with ETS-4308 I with two external S₀ ports only)** as follows: **9 0 3 1 3 1 9 2 0 8 1 5 4 7 1 1**.

1. 15 Initiating a group call (calling several people at the same time)

You can group the staff of a specific department (marketing, sales, etc.) into call groups to enable you to call them at the same time. You must first program the extension groups accordingly (see *user program*).

Calling a call group:



Internal dial tone



Number of the call group (1-8).



Call



Query → with DTMF telephones, punch in **R 3 0** and the number of the call group.

1. 16 Initiating a code call (calling one person at several telephones)

If you arrange a bell signal with someone who cannot always be reached on the same telephone, you can call the person at several extensions within the PBX at the same time (code call). The special ringing rhythm has the advantage that the intended person immediately

recognizes who the call is for. At users' lines to which fax machines or answering machines are connected, code calling may not be allowed, since these devices take calls automatically (see Chapter *Setting Up Various Pieces of Equipment (Quick Configuration)* on page I-40 in the Installation and Configuration Manual). The following bell signals are available:

- 1 one long tone and one short one, pause.
- 2 one long tone and two short ones, pause.
- 3 one long tone and three short ones, pause.
- 4 one long tone and four short ones, pause.
- 5 one long tone and five short ones, pause.

Initiating code calling:



Internal dial tone



Number of the bell signal (1-5)



Call

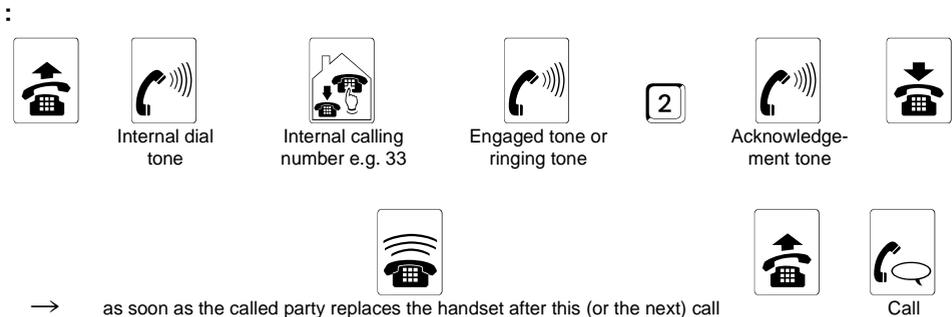
Query → with DTMF telephones, punch in **[R][4][0]** and the number of the bell signal. Transferring an external call using code calling → After replacing the handset, the telephones continue ringing with the **one long tone rhythm** for external calls. With many ISDN telephones, the **ringing rhythm** is not affected; with others, however, the system shows the code call on the display.

1. 17 Callback (the called telephone is engaged or nobody lifts the handset)

If you call somebody who is just making a call, you can reach them as soon as possible by initiating a callback (callback on busy). In this connection, your call and that of other parties is returned as soon as the other called party replaces the handset.

If you call an internal extension, you can – in addition to callback on busy – initiate a callback on no response. In this case, you and the other parties are called as soon as your busy called party has replaced the handset after completing his or her next call.

1. 17. 1 Initiating an internal callback

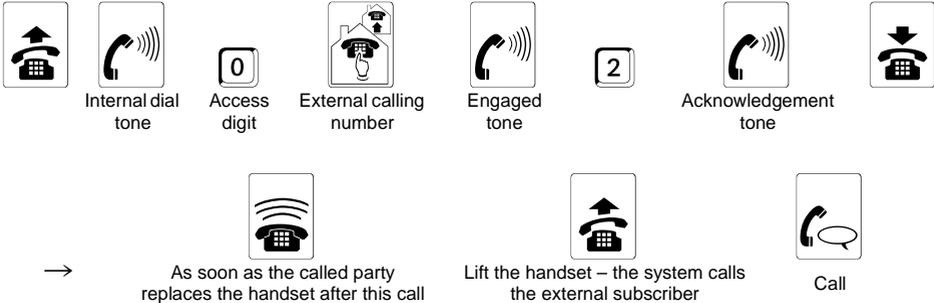


Before punching in the suffix digit, [2] please wait three seconds.

1. 17. 2 Starting external callback (CCBS)

Your PBX supports ISDN feature completion of calls to busy subscriber (CCBS).

Starting an internal callback on busy:



No acknowledgement tone → the exchange refused the desired callback.

Before punching in the suffix digit, **2** please wait three seconds.

The external subscriber must have the appropriate technical **capability** to be able to carry out a callback.

With some network providers, callback to an external subscriber with a **PTP connection** is not possible.

The exchange may trigger the callback **before the external subscriber has replaced the handset**, due to the fact that only one of the B channels of his or her ISDN connection is available.

An **external callback on no response** is not possible.

A callback is stored in the exchange for **up to 45 minutes**. If the subscriber has not completed his or her call within this time, the system clears the callback automatically.

In the case of a callback, you are called **for up to 15 seconds**. If you do not lift the handset, the system clears the callback.

The external subscriber's telephone does not ring until you have accepted the callback by lifting your handset.

1. 18 Call Waiting (Second Call Waiting When Your Telephone is Busy)

If you allow call waiting on your telephone (See Chapter *Call Waiting Permission* on page I-44 in the Installation and Configuration Manual), you can make a phone call at your leisure even though you are expecting an important external call. In this case, the calling party hears the ringing tone even though you are currently carrying on another conversation. For your part, you hear the call waiting signal. This is a signal to you that somebody else is trying to get in touch with you. You now have the option of rejecting the call waiting party – who then hears the engaged tone – or you can accept the call; in this case the previous calling party waits in the background. Call waiting should not be allowed with fax machines and modems, since the call waiting signal disturbs their data transfers.



Call waiting is triggered only by external calls.

Call waiting party (external pick-up):



Lightbulb icon: You now have **various options** for handling the two subscribers (alternation, conference). If you want to transfer the call waiting party that you have taken, you must first complete your conversation with the first calling partner.

Instead of pick-up, you can also complete your current conversation by **replacing the handset**. After this, initiate the other conversation in the normal way by lifting the handset.

Rejecting a call waiting party:



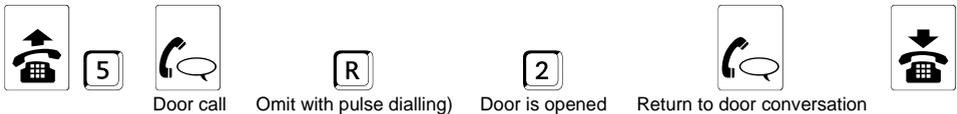
1. 19 Intercom with door opening

Making door calls and door opening on a telephone with doorbell set:



Lightbulb icon: If you do not lift the handset **within 30 seconds** after the last time the doorbell rings, proceed as described below.

Door call and door opening on telephones without doorbells:



Lightbulb icon: If the door function is also set on **relay no. 3** (with ETS-4308 I only – default setting), it is switched on at the same time as the door opener relay for 1-99 minutes. This means that it is used, for example, to automatically switch on and off staircase lighting.

When querying a door extension, **door opening** is not possible with ISDN telephones. To be able to open the door, the telephone set must have door opener permission granted (default setting/see also *user program*).

1. 20 Call protection (do-not-disturb)

If you do not want to be reached, you can use the call protection feature to block your telephone for internal and external calls (e.g. because you don't want the phone in your nursery at home to ring at night). You can of course still make calls from your telephone in this status. (As-delivered, call protection is deactivated.)

Activating/deactivating call protection:



Relevant extension



Universal password



1: on / 0: off



By means of a **priority call**, an internal subscriber can still call a call-protected extension.

For general information on **programming by telephone** and the tones that are issued in this connection, refer to Page B-5.

When you call a call-protected extension, you hear the **engaged tone**.

1. 21 Initiating a priority call (if the called telephone is engaged)

An external subscriber cannot reach an extension that has initiated call protection. Internal subscribers, on the other hand, can get around call protection in case they have to pass on important information.

If you hear an engaged tone after punching in an internal extension number and you still want to reach the extension, punch in another digit to initiate a priority call.

Initiating a priority call:



Internal dial tone



Internal calling number e.g. 33



Engaged tone



Call



If you still hear the **engaged tone** for this extension after punching in a **3** → the subscriber is just making a call.

Before punching in the suffix digit, **3**, **please wait three seconds**

Query → priority call not possible.

1. 22 Taking an existing call (with answering machines)

If your modem or your answering machine, for example, answers a call that is intended for you, you can take this call by punching in the calling number of the corresponding device and then another digit to connect to the calling party. You can of course also take a call from any other extension if you think this is sensible. Once you have picked up the call, the subscriber at this extension hears the engaged tone. The other party must have allowed call pick-up (see Chapter *Setting Up Various Pieces of Equipment (Quick Configuration)* on page I-40 in the Installation and Configuration Manual and in the *user program*).

Taking an existing call



Internal dial tone



Internal calling number (e.g. 33) of the telephone that is making the call to be picked up.



Engaged tone



Picked-up call



To pick up external calls → outgoing access is necessary.

Before punching in the suffix digit, , **please wait three seconds**

If you are already talking to another subscriber, pick-up is not possible.

1. 23 Parking and Transferring on a PTMP Connection (external S₀ port)

The parking/changing over function on the PTMP connection allows you to park an external conversation that you are currently making using a piece of ISDN equipment (an ISDN telephone or your PBX) and to transfer it to another piece of ISDN equipment that you are also running on your PTMP connection (NT/external S₀ bus).

Using the PBX, you can take a call that was parked by another piece of ISDN equipment (e.g. an ISDN telephone on the NT/an external S₀ bus).

In the same way, you can use your PBX to park an ongoing external conversation that another ISDN telephone on your PTMP connection then takes over. The PBX can, of course, also take the parked call itself. The transfer must take place within the specified time of approximately three minutes.

1. 23. 1 Using the PBX to park an ongoing external conversation

Parking a conversation:



External conversation



[Omit with pulse dialing]



Acknowledgement tone



After approximately three seconds, the acknowledgement tone changes to an **engaged tone**; you should not consider this to be a failed attempt at parking a call.

Instead of the acknowledgement tone, **the engaged tone appears immediately** → parking has failed and after a few seconds the system reconnects you with your calling partner. In this case, it may well be that your exchange does not support the Parking/changing over on the bus feature.

Some ISDN telephones are not capable of taking a call that was parked without **code digits**. Using a programming function, you can tell the PBX always to park external calls with code digits (see Chapter *Setting the Code Digits for Parking on the Bus* on page I-44 in the Installation and Configuration Manual).

In the case of ETS-4308 I with two external S₀ ports → selectively initiate the external conversation via the 1st S₀ port. **You cannot** park an ongoing external conversation on the 2nd S₀ port.

Parking/switching over on bus function key on the ISDN telephone cannot be used → The telephone uses this key to park on the internal S_0 bus not on the external S_0 port (see Chapter *Parking and Transferring on internal S_0 bus* on page B-18).

1. 23. 2 Using the PBX to take a parked external conversation

Taking back a parked conversation:



Internal dial tone



Call

 **Engaged tone** → you have exceeded the maximum permissible parking duration (after three minutes, the exchange disconnects the call) or no call is parked.

To take a **call that was parked using code digits** → the corresponding code digits must be entered in the PBX (see Chapter *Setting the Code Digits for Parking on the Bus* on page I-44 in the Installation and Configuration Manual).

1. 24 Parking and Transferring on internal S_0 bus

Using function Parking/switching over on the internal S_0 bus, you can park a call that you are currently making on an ISDN telephone. You can then take this call with **the same ISDN telephone**. This means that you can normally plug in and unplug an ISDN telephone on the S_0 bus at several connecting boxes in the course of a conversation without losing the call. The transfer must take place within the specified time of approximately three minutes. Since you are taking the call with the same ISDN telephone, the PBX ignores an entered **code digit**.

For information on how to park or unpark a call on your ISDN telephone (or another piece of ISDN equipment), refer to the manual of the respective equipment (usually menu querying). The function is also often referred to as **TP or Terminal Portability**.

1. 25 Muting (with DTMF telephones)

To make a query in the room without your calling partner being able to hear you, you can mute the conversation for as long as you like on DTMF telephones.

Muting a call:



Call



Muting:



Return to conversation



Call

1. 26 Follow-me (taking calls to other internal telephones with you)

Follow-me has the same function as permanent call forwarding to internal extensions, which is also described in this manual. The difference is that you set it up at the respective telephone and not at the telephone from which calls are rerouted. This means that you can go from office to office, for example and take your calls with you.

Setting up/deactivating follow-me:



Internal calling number of telephone to be diverted, e.g. 33



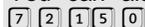
or



for deactivate

 For general information on **programming by telephone** and the tones that are issued in this connection, refer to Page B-5

For redirected external calls, the target telephone needs outgoing access.

You can also **deactivate** follow-me from the redirected telephone by punching in 

Using Follow-me, you can also switch **calls from several subscribers** to the telephone closest to you.

Caution! If you set follow-me for an extension, this will deactivate this extension's call forwarding if it is set.

1. 27 Call forwarding (redirecting calls to internal and external telephones)

Your PBX provides you with a variety of options for setting up call forwarding. You can redirect all the calls to an individual telephone as well as all the ones to a calling number (MSN/DDI). Call forwarding to an external telephone is implemented by entering directly a target calling number or by choosing a previously programmed abbreviated dialling number. You can program call forwarding by telephone from an internal phone or by remote programming from any external telephone set. There are three types of call forwarding:

Permanent (CFU)	The call is redirected straight away.
On busy (CFB)	The call is redirected straight away if the corresponding telephones are engaged.
On no reply (CFNR)	If nobody replies at any of the telephones within the specified time, the call is redirected.

 For general information on **programming by telephone** and the tones that are issued in this connection, refer to Page B-5

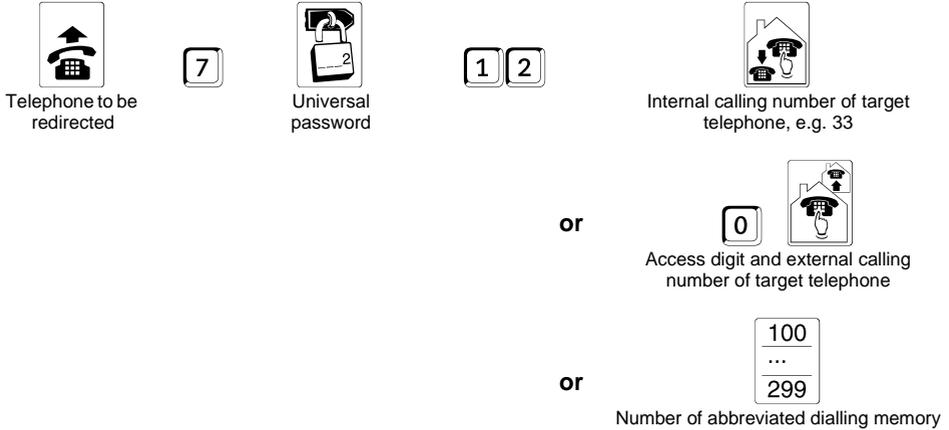
It is not possible to program call forwarding to an internal target telephone from an external one.

For redirected external calls, the target telephone needs outgoing access.

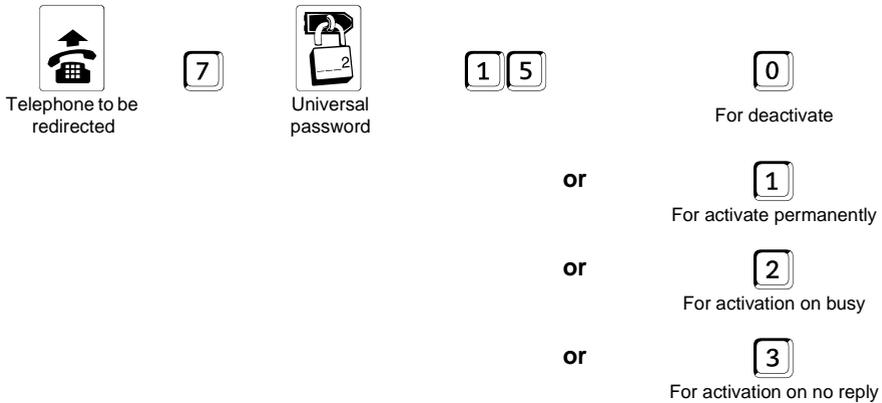
Important! To prevent unauthorized persons from programming call forwarding on your system from an external phone, you should change the external password (Chapter *Changing the Password* on page I-72 in the Installation and Configuration Manual) or limit the authorization for programming call forwarding to activate/deactivate/enter abbreviated dialling number (as delivered, programming from an external telephone is prohibited see Chapter *Allowing external programming* on page I-71 in the Installation and Configuration Manual).

1. 27. 1 Extension call forwarding (redirect telephone)

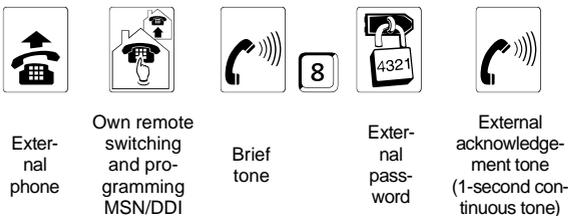
Permanently redirecting an individual telephone:



Activation/deactivation or switching over (the set target calling number is retained):



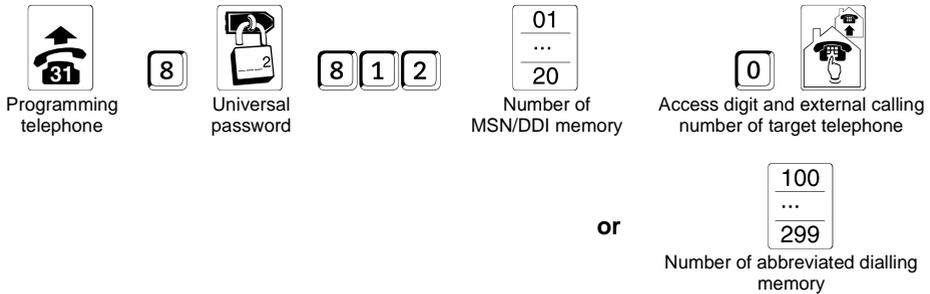
Carrying out from an external telephone (entering digits using a DTMF telephone/DTMF generator):



Now use the same programming digits as from the internal telephone but enter after the **1 2** or the **1 5** the internal calling number of the telephone to be redirected, e.g. **1 2 3 3 1 6 6** for permanent call forwarding of extension 33 to abbreviated dialling number 166.

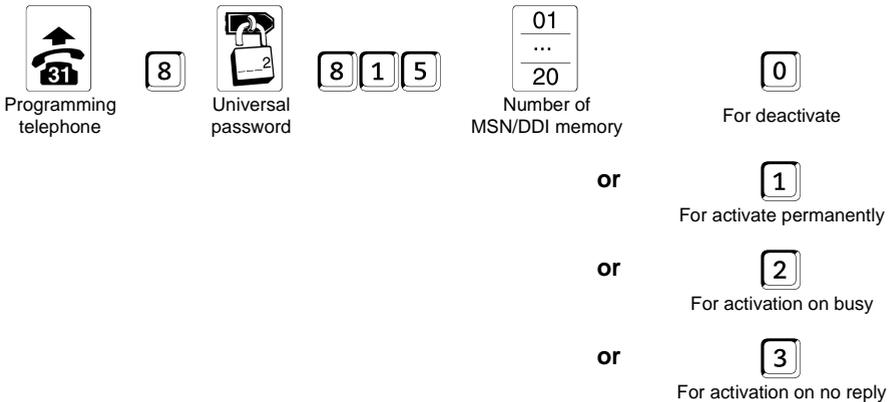
1. 27. 2 MSN/DDI call forwarding (redirect calling number)

Permanently redirecting a calling number (MSN/DDI):



or

Activation/deactivation or switching over (the set target calling number is retained):

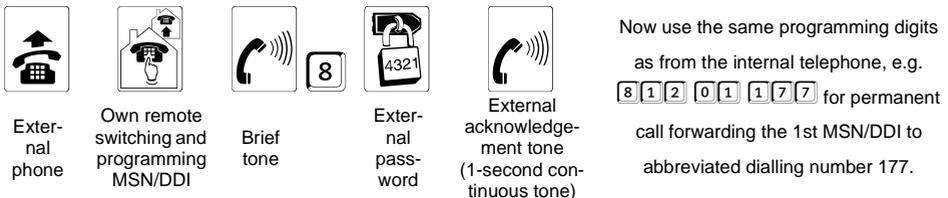


or

or

or

Carrying out from an external telephone (entering digits using a DTMF telephone/DTMF generator):



💡 If you have an ETS-4308 I, enter in each case after the number of the MSN/DDI memory the number of the associated S₀ port (1 or 2).

1. 28 Manually switching over day/night mode

Your PBX allows you to set for each of the extensions different outgoing access, call distribution, etc. (see *user program*). You can specify whether you want to activate and deactivate day and night operation time-controlled by the PBX's internal clock (see Chapter *Day/night mode switching* on page I-53 in the Installation and Configuration Manual) or whether you want this to be carried out manually at appropriate times, e.g. at the start and end of the working day or at the start of breaks. Even if you have activated automatic day/night mode switching, you may still need to carry it out manually.

We assume that your PBX automatically switches from daytime to nighttime operation at 19:00 and back again at 7:00. If you now switch over from daytime to nighttime operation manually at 15:00, for example, the next automatic switchover from night to day takes place at 7:00.

Manually switching over to daytime/nighttime operation:

Universal password

1: nighttime operation
0: daytime operation

Query the switching status of the day/night circuit:

Universal password

1 tone: nighttime operation
2 tones: daytime operation

 If you want to switch over, your telephone needs the appropriate **permission** (see *user program/as-delivered*, extension 31 has switchover permission).

For general information on **programming by telephone** and the tones that are issued in this connection, refer to Page B-5

1. 29 Room monitoring (listening into a room by telephone)

You need this function if you want to acoustically monitor a room, e.g. to check whether your child is sleeping. You can set the extensions of the PBX in the room such that you can call this phone from any other phone (even an external one) and listen into the room.

1. 29. 1 Initiating room monitoring

Setting room monitoring:

Telephone in the room you want to monitor

Internal dial tone

Universal password

Acknowledgement tone

After this, place the handset next to the telephone set.

 Room monitoring can only be activated **on one internal extension** at the same time. If you try to set up a second telephone, the system issues the **engaged tone** after you punch in the number.

To **deactivate** room monitoring → simply replace the handset of the corresponding telephone.

It is **not** possible to monitor a room secretly, since you must always set up the telephone according to the procedure described above.

1. 29. 2 Carrying out room monitoring

Monitoring a room from an internal telephone:



Internal dial tone



Internal calling number (e.g. 33) of the telephone that is set for room monitoring



Room monitoring

Monitoring a room from an external telephone:



External phone



Own remote switching and programming MSN/DDI



Brief tone



Using DTMF telephone or DTMF generator



External password



External acknowledgment tone (1-second continuous tone)



Room monitoring

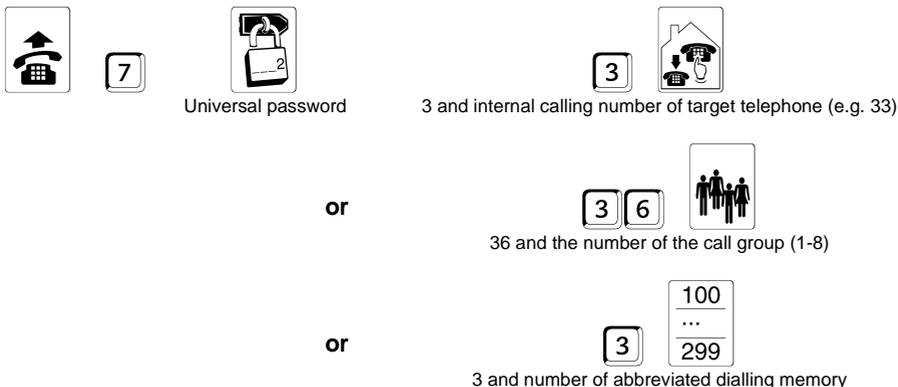
 Engaged tone → **wrong or incomplete code** or you waited longer than 15 seconds while entering the code. Replace the handset and start again from the beginning.

External room monitoring is conditional on your having informed the system of the remote switching and programming MSN/DDI and that you know the external password (default setting is 4321) (see Chapter *Necessary Settings for External Remote Switching and Programming* on page I-70 in the Installation and Configuration Manual).

1. 30 Immediate connection without dialling (automatic dialling after you lift the handset)

Using the immediate connection without dialling function, you can set a telephone in the PBX such that approximately two seconds after somebody lifts the handset the system automatically calls an external extension via an abbreviated dialling number, an internal extension or a group of subscribers. This means that it is not necessary to press any buttons on the phone. However, if you start manually dialling a number within the first two seconds, this is given priority. Note in this connection that many phones do not immediately start outputting digits when you press the keys (it is often delayed by up to half a second). You should therefore start dialling promptly!

Setting immediate connection without dialling:



Deactivating immediate connection without dialling:



💡 For immediate connection without dialling to abbreviated dialling number → **outgoing access** is necessary.

For general information on **programming by telephone** and the tones that are issued in this connection, refer to Page B-5.

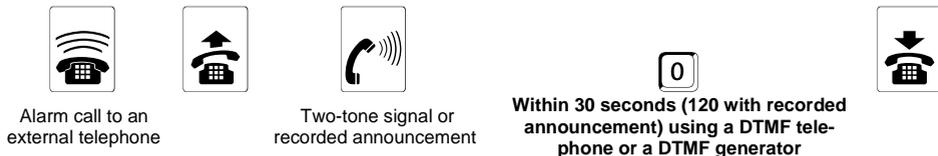
1. 31 Acknowledging a triggered alarm (ETS-4308 I only)

The ETS-4308 I PBX has an alarm input. If this input's two connections (ALARM and GND) are connected together, the system issues an alarm (for more details on the switching input, refer to Chapter *Technical Data* on page I-82 in the Installation and Configuration Manual). For more information on alarm sequences and the settings that you need for them in your PBX, refer to Chapter *Activating alarm (ETS-4308 I only)* on page I-62 in the Installation and Configuration Manual. The following section describes how you acknowledge (switch off) an alarm that has already been triggered.

Acknowledging an alarm from an internal alarm extension:



Acknowledging an alarm from an external alarm extension:



1. 32 Switching the remote switching relay (by telephone)

If you are using your relays as universal switching relays, you have the option of remote-switching them from an internal or an external telephone. For information on setting this functionality for your relays, refer to Chapter *Universal switching relay* on page I-60 in the Installation and Configuration Manual. If you want to switch a remote-switching relay from an internal telephone, it needs remote switching permission (see *user program/as-delivered*, all extensions have remote switching permission).

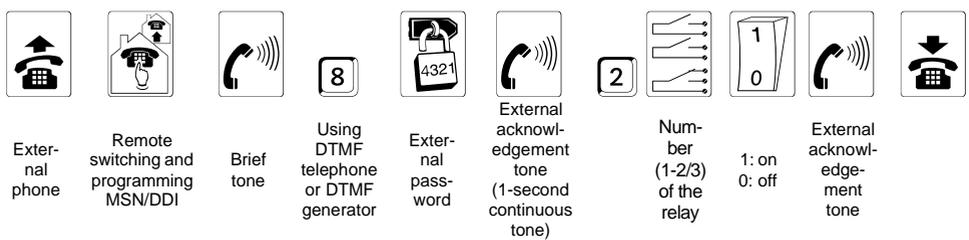
You want to activate/deactivate a remote switching relay from your telephone:



Lightbulb icon: For general information on **programming by telephone** and the tones that are issued in this connection, refer to Page B-5

Settings “always on in daytime operation” and “always on in nighttime operation” (see Chapter *Universal switching relay* on page I-60 in the Installation and Configuration Manual) have higher priorities compared to the other switching options of the universal switching relay. This means that it is not possible, for example, to use the remote switching function to switch off the relay while one of these two settings keeps it in the switched-on status. With remote switching, you still hear an acknowledgement tone because the system doesn't ignore this new desired switching status but just displaces it. If you chose the “always on in daytime operation” setting and use the remote switching function to switch on the relay during the day, it stays switched on at the transition to nighttime operation.

Alternatively, from an external telephone:



Lightbulb icon: **Remote switching from outside** is conditional on your having informed the system of the remote switching and programming MSN/DDI and that you know the external password (default setting is 4321) (see Chapter *Necessary Settings for External Remote Switching and Programming* on page I-70 in the Installation and Configuration Manual).

1. 33 Remote programming (by the service technician)

This function makes it possible for service technicians or customer service staff to read or program the configuration data of your PBX during an external connection.

Without your personal consent, **it is not** possible for these people to access your system in this way! This means that service technicians cannot carry out (one-off) remote programming until you have given your permission by punching in a specific digit.

Sequence of remote programming:

For the customer:

- 1 You talk to the service technician via one of your PBX's extensions and an established external connection. For his or her part, the technician uses an extension in his or her telephone system and has a PC running your PBX's user software connected to the serial port of his or her system.
- 2 The service technician explains to you the action he or she is going to take with your PBX's configuration data.
- 3 If you are agreed with the action that the technician intends taking, punch in **R 99**.
- 4 You now hear the acknowledgement tone and you can replace the handset.
- 5 The external connection is now maintained for a certain period of time to allow the technician to read out data or reprogram it.
- 6 After this, the connection is either cleared or the service technician calls back so that you can talk to him or her again.

For the service technician:

- 1 You use an extension in your telephone system and an established external connection to talk to the customer, who uses an extension in his or her PBX.
- 2 You explain to the customer the action you are going to take with his or her PBX's configuration data.
- 3 If the customer agrees with your intended action, he or she punches in **R 99** and you dial **R 98**.
- 4 You now hear the acknowledgement tone.
- 5 Using the user program (System menu item Remote Load or Remote Store) you can either read out or reprogram all the programming steps.
- 6 You now hear the engaged tone (the signal to replace the handset). After this, you should replace the handset.
- 7 You can exit the user program menu item either with or without re-calling; i.e. after carrying out remote programming, the connection is either cleared or a re-call is triggered to allow you to talk to the customer again.

 The **service technician** must have an ETS-1006 FAX, ETS-2006, ETS-2006 FAX, ETS-2008 I, ETS-2104 I, ETS-2106 I, ETS-2116 I, ETS-4016 FAX, ETS-4216 I, ETS-4308 I, ETS-2204 I, ETS-2106 I Rev 2 or an upward-compatible system to be able to read and change the programming of your PBX via an external connection between the two systems. Apart from this, he or she needs the **user software** for the customer's PBX.

If the service technician changes the downloaded **programming data**, it is not updated in your PBX at the same time. To do this, the technician must upload the data back to the PBX after he or she has changed it (in the same way as it was downloaded).

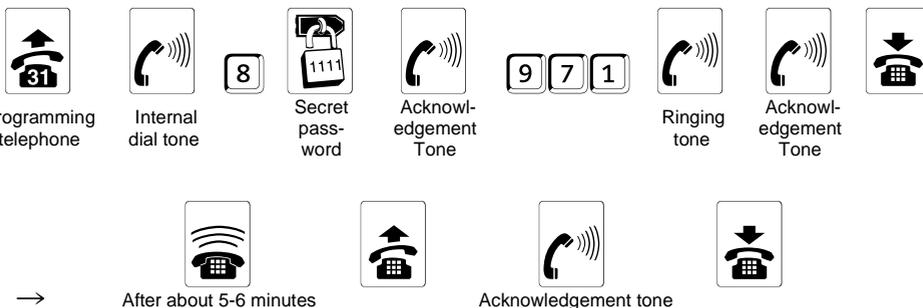
If the dealer uses an ETS-2106 I Rev. 2, ETS-4308 I, ETS-2204 I or an ETS-2104 I (or a newer ISDN system), data is transferred between the systems much more quickly, since the transfer is **digital via the B channel**. A normal configuration with a relatively old system takes between about 10 and 30 minutes, whereas the digital configuration takes less than one minute.

1. 34 Automatic Firmware Update

We offer you with your PBX an automatic update for your firmware. Apart from the telephone charges that you incur, this update is free. As a result, the firmware is always up-to-date. We do our best to integrate changes as quickly as possible into the current firmware. If you should have functional problems with your PBX, you should first carry out a firmware update. If this doesn't cure the problems, you should then consult your dealer.

When you use the following programming function to initiate the automatic firmware update, your PBX makes an external connection to a server and downloads the current software. If possible, you should only start this procedure during a quiet period (i.e. not in the most hectic phase of a normal business day), since the PBX has to end all the other calls before carrying out downloading of the software. Assuming that the PBX can make a connection to the server, the entire process takes about five to six minutes.

You want to initiate the automatic firmware update:



💡 To be able to carry out this procedure, the **programming switch** in the system (on the PCB) must be in the “erlaubt” (allowed) setting.

The telephone rings for 60 seconds. If you do not lift the handset, then the PBX still carries out the procedure but you cannot check whether everything functioned correctly (by hearing the **acknowledgement tone**).

If you hear an **engaged tone** instead of the ringing tone or the acknowledgement tone after punching in **[9][7][1]**, the connection is engaged. Replace the handset and try again later.

If you hear an **engaged tone** instead of the acknowledgement tone after the system calls back, this indicates that the update did not function. In this case, you must repeat the entire procedure.

If an external subscriber **calls you during this procedure**, you should complete the call as soon as possible. If you don't do this, the PBX will probably interrupt the call automatically.

If the procedure **takes less than 60 seconds** and you still hear an acknowledgement tone, you already have the latest firmware version.

You can get information on new features in the Internet.

The update changes the **version number** of the firmware. You can query it by means of the user program and by telephone (see Chapter *Automatic Firmware Update* on page I-69 in the Installation and Configuration Manual) or on an SD-420 system display (optional accessory) that may be connected.

The system of course retains your **call data, wake-up times and configurations**. Only the operating software of your PBX is updated.

Your PBX already knows the **calling number of the server**. If the calling number for the automatic firmware update should ever change, you can use a programming function to tell the PBX the new number (see Chapter *Automatic Firmware Update* on page I-69 in the Installation and Configuration Manual).

1. 35 Operating an SD-420 System Display

If you have an SD-420 system display (optional accessory) connected to your PBX (if available in your country), you can query various status conditions in the system. You must assign the system display to an extension at which you want to make this query (see Chapter *Assigning a System Display* on page I-73 in the Installation and Configuration Manual). This extension should be a DTMF or an ISDN telephone, since you need the **[*]** key for the menu-driven query. (On many ISDN telephones, the **[*]** key is not assigned to a function).

In its basic status, the system display shows, amongst other things, the time and the assignment overview, i.e. it informs you of the B channels that are currently busy and the subscriber who is are currently making a call. Apart from this, a message line shows incoming calls or the settings that currently apply at the associated telephone.

As soon as you lift the handset of the telephone to which the system display is assigned (by default Ext 31), the system prompts you to dial. If you now press the **[*]** key, the system displays the main menu containing the query functions. There is a digit before each menu item that you punch in to choose the respective submenu. Pressing the **[*]** key always takes you back to the previous menu. Operation is simple and intuitive.

1. 36 Automatically shutting down extensions

If a subscriber doesn't replace the handset properly or makes a relatively long pause while punching in a number, the system shuts down the extension after 60 seconds (10-15 seconds with ISDN telephones) and applies the engaged tone. This prevents this extension from blocking the PBX. The function that the subscriber wanted to initiate but did not complete is aborted on shutting down. It is not possible to call a shut-down extension. You hear the engaged tone. To reverse the shutdown condition, replace the handset.

2 Troubleshooting

Due to the wide range of functions in your PBX, it is possible for **operating errors** to trigger unwanted functions. You could, for example, **punch in a wrong number** when programming using a telephone set. If you punch in a sequence of digits that the PBX doesn't know, you will hear the engaged tone. Punching in a wrong digit, could also produce another valid programming number that has a completely different effect to the one you want.

For this reason, you are strongly advised to carry out as much programming as possible using your PC. If this is not possible and your PBX is in a fault status that you do not know how to remedy, we would advise you to **initialize** individual functions (see Chapter *Initialization* on page I-75 in the Installation and Configuration Manual). **Quick configuration of individual extensions** (see Chapter *Setting Up Various Pieces of Equipment (Quick Configuration)* on page I-40 in the Installation and Configuration Manual) can also help to return your PBX to a defined status.

Another possible source of errors is programming "by mistake". If you want to make a local call, for example, and forget to punch in the access digit 0 first, the PBX could interpret the external calling number as a programming number. A good way to **prevent this** is provided by the **programming switch** and the **password** that you have to enter first (unless the external calling number matches the password).

While making a call, ensure that you do not call any functions that are invalid in the respective call status, e.g. punching in an abbreviated dialling number during an ongoing conversation. If you want to call in an ongoing conversation a pulse dialling telephone with abbreviated dialling number 134, the PBX detects from the first digit onwards that the function is not valid in this call status. The digit 1 is ignored. The system now evaluates the digits 3 and 4 and they result in extension 34 being called (this is a valid function from the ongoing conversation).

In some cases, apparent faults in the telephone system are in fact due to **disturbances to the telephones** (ringer deactivated or similar), a **power failure** or a disturbance to the NT. Note that due to differing **outgoing accesses** of the extensions, **querying** or **transferring** are sometimes not possible. If you have programmed an extension without outgoing access, for example, and you want to transfer an external conversation there, you will hear the engaged tone. The table below describes possible errors like this that can occur as well as possible remedies for them.

If you have ruled out operating errors or external influences, we would advise you to carry out an **automatic firmware update** (see Chapter *Automatic Firmware Update* on page B-27). It may well be that the malfunctions that occurred in your case have already been eliminated in a newer version of the software. The system of course retains your **call data, wake-up times and configurations**. Only the operating software of your PBX is updated.

2.1 Possible Faults

No dial tone

Possible Cause

- ① Power failure or mains plug not plugged in
- ② Defective connecting box or cable between telephone and connecting box
- ③ System disturbed

Remedy

- ① Check the 230-V supply
- ② Check connecting box or cable between telephone and connecting box
- ③ Separate the PBX from the 230-V supply for about 5 seconds

External dialling or abbreviated dialling doesn't work

Possible Cause

- ① S₀ ports configured wrongly
- ② System is not connected to the ISDN
- ③ NT disturbed
- ④ Wrong ISDN protocol
- ⑤ Telephone does not have outgoing access
- ⑥ Direct external telephone is set without having first set the dialling mode
- ⑦ Charge account is empty

Remedy

- ① Correct the configuration
- ② Connect the system to the ISDN
- ③ Separate the NT from the 230-V supply for about 5 seconds. If there is still no dial tone, inform the repair service.
- ④ Apply for a DSS1 ISDN protocol
- ⑤ Grant outgoing access from the programming telephone/PC
- ⑥ Set the correct dialling mode from the PC
- ⑦ Increase the charge account from the PC

No external calls

Possible Cause

- ① Call forwarding is activated
- ② No MSN/DDI has been assigned to the telephone
- ③ The telephone's ringer is faulty or deactivated
- ④ Telephone does not have outgoing access
- ⑤ Call protection is activated

Remedy

- ① Deactivate call forwarding
- ② Assign MSN/DDI (call distribution)
- ③ Have the telephone inspected
- ④ Grant outgoing access from the programming telephone/PC
- ⑤ Deactivate call protection

Abbreviated dialling doesn't work but external dialling does

Possible Cause

- ① No abbreviated dialling numbers stored
- ② Access digit [0] was stored in the abbreviated dialling number

Remedy

- ① Program abbreviated dialling number
- ② Remove the access digit [0]

No internal calls

Possible Cause

- ① Extension call forwarding or call protection activated
- ② The telephone's ringer is faulty or deactivated

Remedy

- ① Deactivate extension call forwarding or call protection
- ② Have the telephone inspected

No call forwarding from external

Possible Cause

- ① The extension to which the call was redirected does not have outgoing access

Remedy

- ① Grant outgoing access from the programming telephone/PC

Transferring external calls doesn't work

Possible Cause

- ① Extension does not have outgoing access
- ② Telephone's Flash key is not set correctly

Remedy

- ① Grant outgoing access from the programming telephone/PC
- ② Check the Flash key (refer to the telephone's operating instructions) and if necessary set the correct Flash time in the PBX or carry out automatic Flash time detection

Query from external calls doesn't work

Possible Cause

- ① Extension does not have outgoing access
- ② Telephone's Flash key is not set correctly

Remedy

- ① Grant outgoing access from the programming telephone/PC
- ② Check the Flash key (refer to the telephone's operating instructions) and if necessary set the correct Flash time in the PBX or carry out automatic Flash time detection

Pick-up doesn't work

Possible Cause

- ① The subscriber who wants to carry out external pick-up doesn't have appropriate outgoing access.
- ② All the B channels on the internal S₀ port are assigned (ISDN telephone)

Remedy

- ① Grant outgoing access from the programming telephone/PC
- ② The other conversation must be completed first.

Special tone instead of the dial tone

Possible Cause

- ① Call forwarding, call protection, immediate connection without dialling or an information tone (call data memory more than 80% full) is activated

Remedy

- ① If necessary, deactivate the corresponding function. Important: with immediate connection without dialling, you must do this within the first two seconds

Crackling on the line shortly after lifting the handset or interruptions in the dial tone

Possible Cause

- ① Charge transfer at the start of the next call is activated
- ② The handset cord is faulty

Remedy

- ① If necessary, deactivate the corresponding function.
- ② Replace the cord

It is not possible to program the system

Possible Cause

- ① The programming switch is in the Programming blocked ("Programmieren gesperrt") position

Remedy

- ① Switch over to Programming allowed ("Programmieren erlaubt")

Making calls on the internal S₀ port doesn't work

Possible Cause

- ① Wiring fault on the internal S₀ bus
- ② You didn't assign MSNs (41-48) to ISDN telephones
- ③ The S₀ module is plugged into the wrong slot (ETS-4308 I)

Remedy

- ① Eliminate the wiring fault
- ② Set up one MSN (41-48) each for the ISDN telephones (refer to your telephone's operating instructions)
- ③ Plug the S₀ module into another slot

A conversation is terminated when you press the Flash key

Possible Cause

- ① The telephone's Flash time is too long

Remedy

- ① Set the correct Flash time in the PBX or carry out automatic Flash time detection

3.1 Safety information

Please observe the *safety information* in the Installation and Configuration Manual (Page I-83).

3.2 Warranty Terms

Auerswald GmbH & Co. KG guarantees this product for twenty-four months from the date of purchase. If disturbances occur during operation, please consult your dealer or supplier. We reserve the right to carry out repairs or replace components. The parts used for this will be new or as new. Returned parts become the property of Auerswald GmbH & Co. KG.

The warranty excludes damage resulting from improper handling, operator errors, abuse, external influences, lightning surge, changes to the product as well as changes or additions to the product. Excluded from the warranty are also all parts subject to normal wear and tear (e.g. leaking batteries). Equally, damage in-transit, consequential damages and the costs of downtimes and time in transit.

The warranty claim is invalidated by repairs that are carried out by unauthorized persons or organizations. The warranty will only be implemented on presentation of an unequivocal proof of purchase (a bill or a till receipt).

If your equipment needs to be repaired, pack it carefully (if possible in the original packaging material), enclose a detailed description of the trouble and send it post-prepaid either to your dealer or to Auerswald GmbH & Co. KG. Outside Germany, you should send it to the respective main importer or distributor listed on the back of the manual.

Freight collect packages cannot be accepted.

Before sending your equipment, please inform yourself of the conditions of repair and include a telephone number where you can be reached if there are any queries. This allows us to repair your equipment and return it to you more quickly.

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Customer Service

If you have any queries about your AUERSWALD telephone system, please contact your dealer. Our close ties with our authorized dealers, appropriate training courses and a regular flow of information make our authorized dealers your and our competent partners.

We will be able to answer more quickly and more precisely any queries that arise if you first gather all the necessary information, e.g. the AUERSWALD telephone system in question and the telephones, answering machines or fax machines that are connected to it as well as the version of the firmware and user software in the telephone system.

You can often solve many problems simply by reading the manual or the files that are supplied with the user software. Outside Germany, you should consult the respective main importer or distributor.

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