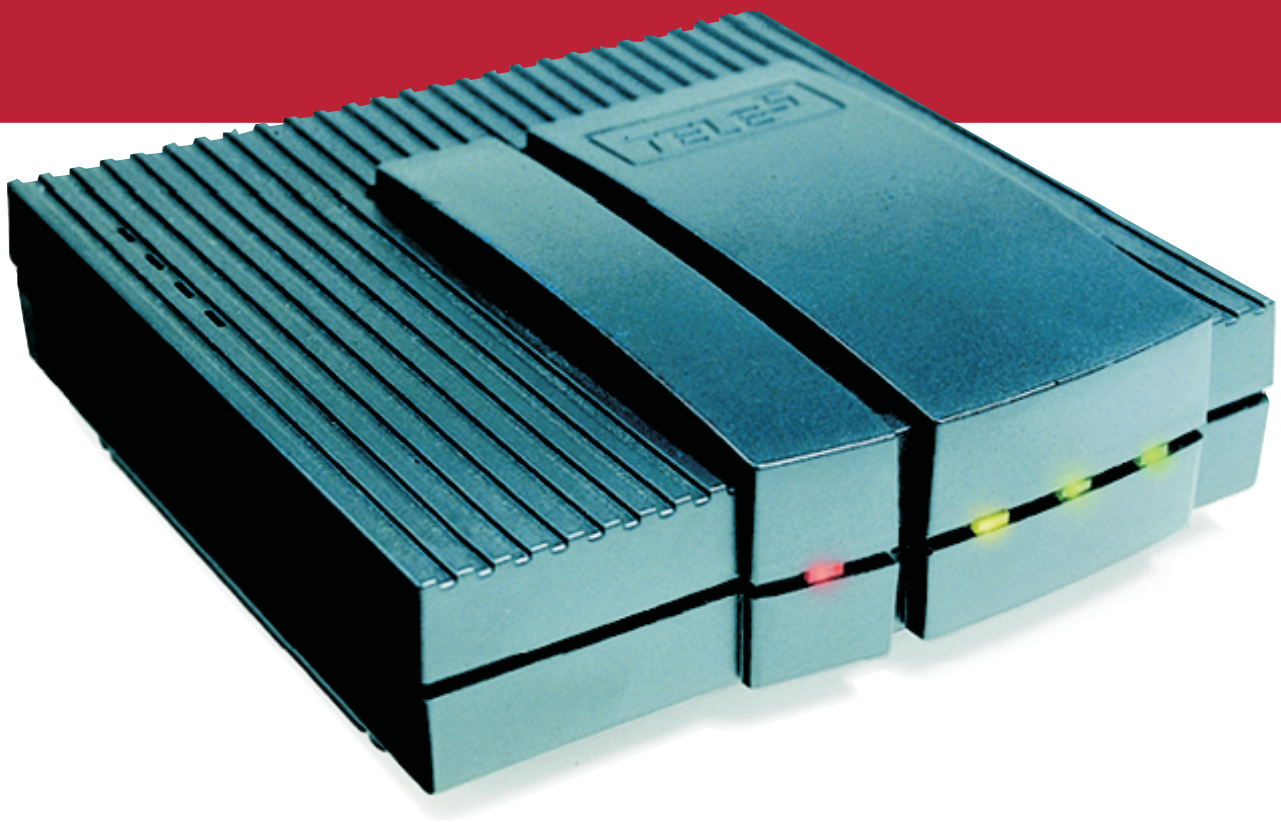
TELES.iTA/2TR Box

ISDN Terminal Adapter for Analog Devices



User's Manual

TELES

TELES.iTA/2TR Box

Version 1.30

User's Manual

TELES AG

BERLIN

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The TELES.iTA/2TR Box

The TELES **i**ntelligent **T**erminal **A**dapter **TELES.iTA/2TR Box** is an external unit that allows you to easily connect two analog terminal devices, such as conventional telephones or fax machines, to ISDN. **Two** standard analog **TR** ports (**T**ip&**R**ing) are provided for these devices on the one hand and a **b**asic **r**ate **i**nterface (**BRI**) for the ISDN line on the other.

1 Features

The **TELES.iTA/2TR Box** does more than simply provide an ISDN interface for analog devices. Several useful features are also provided:

- The simultaneous operation of two analog terminal devices that support touch-tone dialing.
- The ability to attach all such terminal equipment (telephones, facsimile machines, answering machines, PBX equipment etc.)
- The box supports the ISDN protocol DSS1 and is therefore suited for Euro-ISDN ports.
- Operation and active connections shown by LEDs.
- The ability to configure a call number for each TR port.
- All functions are set by an attached telephone that supports touch-tone dialing – but much easier via PC when attached to a PC with a TELES.ISDN board and TELES.OnlinePowerPack (see following page and section 5.6, page 26). Convenient dial support, Call Line Identification as well as **iTA** status display on your PC are further features offered.
- Internal calls between both TR ports as well as call holding and call transfer using the telephone's R key to switch calls between both TR ports. Calls to and from ISDN phones on the same ISDN line.
- The ability to attach several **TELES.iTA/2TR Boxes** to a single ISDN line.
- Comfortable call transfer to other terminal devices attached to the ISDN line.
- Remote call forwarding.
- PIN protection for all important functions.
- Personal CallBack Server for making automatic collect calls. This is an ideal solution for situations in which you would like your telephone to be billed for calls made by family members, relatives, colleagues or even yourself when traveling.

Note:	Due to technical differences in ISDN lines of various countries not all features of your **TELES.iTA/2TR Box** may be available.

2 Package Contents

Your **TELES.iTA/2TR** package is delivered with the following components:

- ❑ TELES.iTA/2TR Box
- ❑ 12 Volt external power supply
- ❑ Cable with RJ-45 plugs for the ISDN line
- ❑ Cable with RJ-11 plugs for analog devices
- ❑ User's manual

TELES.iTA/2TR Box

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3 Installing the TELES.iTA/2TR Box

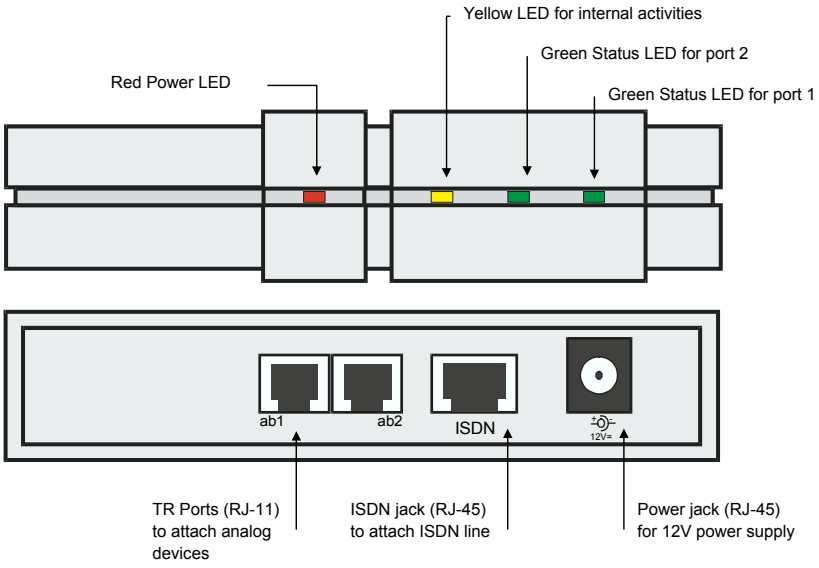
This chapter describes how to attach and configure your **TELES.iTA/2TR Box**.
In order to successfully complete the installation; please follow the steps below:

1. Attach the external power supply's power cord to the power jack of your **TELES.iTA/2TR Box**, and then plug the external power supply into an electric outlet.
2. Attach analog terminal devices to the TR ports at the back of the **TELES.iTA/2TR Box**.
3. Attach your **TELES.iTA/2TR Box** to the ISDN line via the ISDN jack.

Following steps are optional:

4. Change your PIN.
5. Set call numbers for the TR ports.

You should now be able to make and receive calls with devices attached to the TR ports.



3.1 Attaching TELES.iTA/2TR Box

3.1.1 Attaching Power Supply

First, attach the external power supply to your TELES.iTA/2TR Box by plugging the power cable into the power jack. Plug the power supply into an electric power outlet.

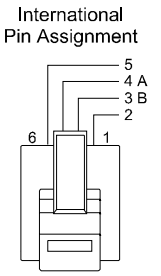
The TELES.iTA/2TR Box then conducts a diagnostic self-test. During the test each LED will light up and the red power LED will remain lit.

3.1.2 Attaching Analog Devices

Attach your terminal equipment to the TR ports located at the back of the TELES.iTA/2TR Box.
In the table below you will find a list of possible connections.

Device Connector	*Type of Connection*
Devices with RJ-11 plugs (international standard)	Attach your devices directly to the TR ports. (see figure on page 3)
Devices with other plugs	Purchase an adapter from your local dealer that converts your plug to a RJ-11.

The figure on the right shows the RJ-11 plug. The letters A and B indicate the pins that are used. Lift the receiver and check if the LED for that port lights up. You can attach a maximum of three terminal devices to each TR port.



3.1.3 Attaching to ISDN

Attach your **TELES.iTA/2TR Box** to the ISDN line (also known as the BRI or S/T interface) using the RJ-45 cable provided. To activate the ISDN line, lift the receiver of a telephone attached to the TELES.iTA/2TR Box. The appropriate green port LED should light up and a dial tone should be heard. If not, there is a problem with the ISDN line or the ISDN cable is possibly defective (see chapter 6.3).

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3.2 Required Settings for Operating TELES.iTA/2TR Box

The **TELES.iTA/2TR Box** is set via a DTMF/"touch-tone" telephone (DTMF = Dual Tone Multi Frequency) attached to any port of the box. The telephone should also have a ✱ **key** (tone) and a **# key** (pound/flash). Please refer to documentation that came with your telephone to determine if your telephone is set to touch-tone dialing. If it isn't, you should be able to switch it from dial pulsing to touch-tone dialing.

All settings are made by entering a command sequence beginning with the ✱ key followed by a command number. Depending on the function desired, you then again enter the ✱ key followed by one or more numbers. Each number entered must be preceded by the ✱ key. The # key finishes the command sequence.

✱ command no. ✱ number 1 ✱ number 2 ✱ number 3 #

If a setting was carried out successfully, you will hear a long beep. If a setting was unsuccessful, or if you made a mistake, you will hear a trill.

Besides using a telephone for configuration, you can also make settings using a user-friendly Windows software. All you need is an ISDN board for your PC – e.g. a TELES.BRI board with the TELES.OnlinePowerPack application suite. This board should be attached to the same ISDN line as the TELES.iTA/2TR Box (see section 5.6, page 26).

To configure your TELES.iTA/2TR Box, you must first configure your PIN (Personal Identification Number).

3.2.1 Configuring the PIN

Several important settings for your TELES.iTA/2TR Box require you to enter a PIN (Personal Identification Number). The PIN must be a 5-digit number; PIN 00000 is configured by default. You can only perform one setting using the default PIN and that is configuring the PIN to another number.

NOTE: It is imperative that you remember your newly configured PIN. We recommend writing it down and storing it in a safe place. Should you forget your PIN, you will be unable to change any settings! In this case you have to send your **TELES.iTA/2TR Box** back to TELES for maintenance!

To change your PIN, enter the following command sequence:

✱90✱oldPIN✱newPIN✱newPIN#

Example: To change the PIN from the default setting (PIN=00000) to 01234:

✱90✱00000✱01234✱01234#

3.2.2 Assigning Call Numbers to TR Ports

The TR ports are not pre-set to any call numbers. Consequently, your TELES.iTA/2TR Box will answer all incoming calls at both ports.
If you assign a unique call number to each TR port, the attached device will only answer calls sent to that number. You will find the call numbers available for your ISDN line in the documents provided by your ISDN carrier. For point-to-multipoint lines, you may receive **three or more MSNs** (depending on country and carrier). These MSNs (= Multiple Subscriber Numbers) are your complete call numbers without prefixes).

NOTE: You must enter a call number separately at and for each TR port.

To assign a call number to a TR port, proceed as follows:

1. Attach an analog telephone to the TR port (jack) you would like to configure.
2. Enter the command sequence for the call number *without area code*.

✶01✶PIN✶Call number#

Example: The TR port attached to your telephone is to be assigned the call number: (415) 335561. Do not enter area code. The PIN is 01234. You would enter:

✶01✶01234✶335561#

The number will be active immediately and your telephone will now answer all calls to this number. When you make calls, this is also the number that will be transmitted to the party you're calling.

NOTE: If you do not assign a call number to any telephone, both ports will accept all incoming calls. If only one port does not have a call number, it will not ring (even when the other device on the other port has a number and is called). Only internal calls to this port are possible in that case. If you do not assign any call numbers including a number for Personal CallBack, you will not be able to take advantage of the Personal CallBack feature, nor will you be able to perform remote administration.

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3.2.3 Setting Service Indicator for Outgoing Calls

The TELES.iTA/2TR Box and thus all terminal devices attached to it accept calls for all analog service indicators. Outgoing calls use the service indicator 'telephony analog'. Thus it should be possible to establish connections to most usual terminal devices.

Problems can arise for some fax machines attached to PBXs when they accept only calls that have the fax group 3 service indicator. In this case, you can adapt the service indicator of the fax machine's port.

Type	*Function in DSS1*
1	ISDN telephony
2	Analog telephony
3	Fax Group 2
4	Fax Group 3
5	Telephony option 1
6	Telephony option 2

Enter the following command sequence:

✶04✶PIN✶type#

Example: To set 'fax group 3' (type 4) for the current port, enter:

✶04✶01234✶4#

NOTE: The service indicators 'Telephony option 1 and 2' are intended for PBXs that do not accept 'Analog call' or 'ISDN Telephony'.

3.2.4 Changing Gain of TR Port Signals

Command 09 allows you to change the signal gain of the individual TR ports. It has the effect of increasing or decreasing the volume of what you hear in the telephone. Two settings are available:

Number	*Setting*	*Description*
1	low	-3,5 dB – signal is quiet
2	high	+2,5 dB – signal is loud

To change signal gain, enter the following command sequence:

✶09✶Number#

The setting takes effect only for the TR port at which the setting is initiated.

Example: To make the telephone you are using louder, enter the command sequence:

✶09✶2#

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3.2.5 Set Device ID

Device IDs are only necessary when you operate several TELES devices together on a common ISDN line and want to use the special functions that the TELES.Family patent offers: comfortable call transfer, programming and telephoning through TELES.OnlinePowerPack. When you've attached **only** one device – that is only your **TELES.iTA/2TR Box** – on the ISDN line and do not use these features then the device ID is without meaning. Changes on your part are not necessary then.

The device ID is a **single digit** number. Numbers 1 to 8 are available. The factory settings give each device the **ID 1**.

To change the device ID, enter the following command sequence:

✱92✱PIN✱ID#

Example: You would like to assign the device ID 2 to the TELES.iTA/2TR Box.

✱92✱01234✱2#

For comfortable call transfer to TELES-ISDN devices on the same ISDN line, the box's device ID always connects to port 1. For port 2, enter the number of the device ID plus 1.

Example: Say the box's device ID is set on 5. For port 1 you would simply dial 5, for port 2 dial 6 (i.e. 5+1=6).

You do not have to set the additional device ID yourself, but only keep it reserved and not assign it to another device.

4 Using the TELES.iTA/2TR Box

4.1 External Calls

Unlike when using other private branch exchanges, you will hear the dial tone for an outside line as soon as you pick up the receiver. You do not have to dial for outside access. If both B channels are busy, or if the connection between the TELES.iTA/2TR Box and the ISDN line is interrupted, you will hear two short tones and a long pause. This indicates that for the time being you can only make internal calls.

4.2 Internal Calls

It is possible to call the other internal extension of a **TELES.iTA/2TR Box** from either extension. The extension number corresponds to the port number (either 1 or 2). Enter ✱ followed by the desired port number:

✶ port number

Example: You are calling from a device attached to port 1 and would like to call the telephone on port 2. You simply enter:

✶2

4.3 Disconnect

Some telephones are equipped with a so-called disconnect key. **TELES.iTA/2TR Box** emulates this function when a two key command sequence is used. Just enter:

##

4.4 Sending Commands to the PBX

This function is only necessary, if your **TELES.iTA/2TR Box** is attached (subordinate) to a PBX. Lift the receiver and press the # key. The commands entered then go straight to your PBX; nothing is valid for the **TELES.iTA/2TR Box**.

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4.5 Hold and Alternate

You are conversing with one party and would like to briefly ask a third party a question, i.e. hold for enquiry. You can put the first party on hold by pressing the R key. You will then hear the dial tone and can now call the third party. After completing the call to the third party, you switch back to the first party by pressing the R key again. Switch back and forth between both parties, i.e. hold and alternate, by pressing the R key.

R key third party number

Example: You already have a party on the line and would like to consult someone at the number 444444. You would then enter the following:

R key 444444

You can terminate a call to either party by pressing the # key twice. If one party is internal, the other parties will be connected with each other when you hang up. If both parties are external, you will terminate both connections when you hang up. However, should you be calling through a PBX, both external parties will be transferred to each other.

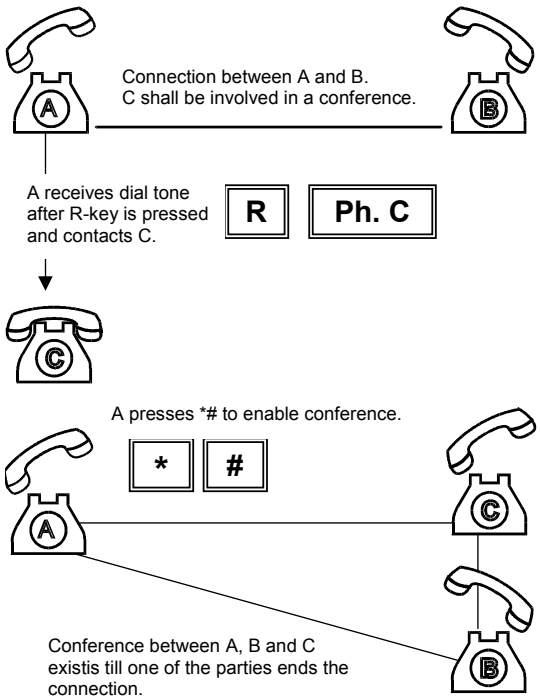
NOTE: If difficulties arise when using the R key, check the flash time settings as described in section 6.2, page 30.

4.6 Three-Party Conference

A three-party conference is the simultaneous connection among three parties. Besides the telephone connected to the TELES.iTA/2TR Box, the other two parties have to be external callers. A three-party conference with two internal and one external party is not possible.

During this conference call all three participants can talk to and hear each other. When you enter the key combination ✱# a connection on hold is linked to the existing connection to compete the conference.

The conference ends when any one of the participants disconnects either by pressing ## or by hanging up.



Note: The service feature three-party conference has to be supported by your ISDN carrier.

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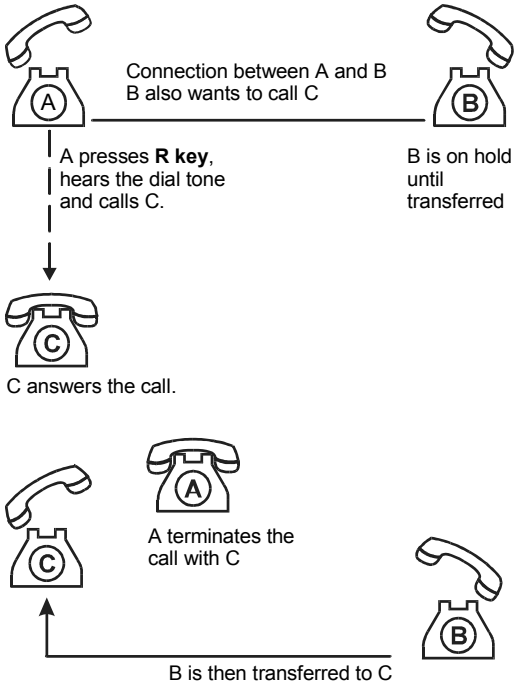
4.7 Call Transfer

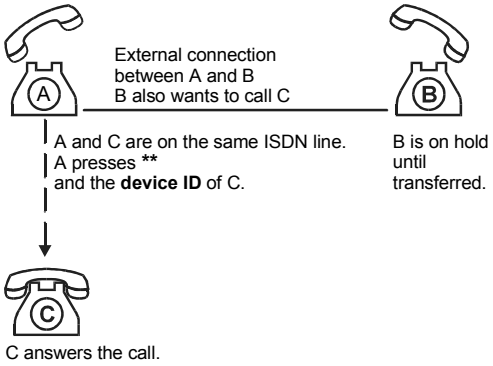
You can transfer a current conversation to a third party, by pressing the R key, calling the third party and then hanging up once that party answers.

The TELES.iTA/2TR Box can only transfer calls from an **internal** party **to** an **external** party and vise-versa. Call transfers from an external party to another external party are not possible. An exception exists when the TELES.iTA/2TR Box is attached to a PBX that will handle the call transfer between external parties.



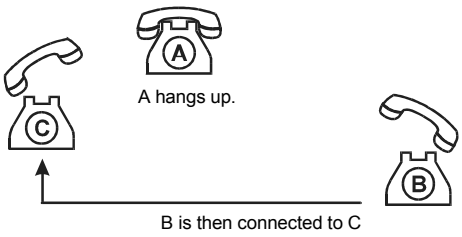
4.8 Comfortable Call Transfer

You can transfer a call internally to another party on the ISDN line or interface only if it also is an ISDN device, e.g. TELES.FON or another TELES box (see “Set Device ID,” page 9).
To transfer calls to internal ports on the TELES.BRI/2TR Box or to external numbers, e.g. public phone numbers see “Call Transfer,” page 13.



To transfer to another device on the **same ISDN line** dial:

✶✶ device ID



In case there is no answer at the device to which the call should be transferred, you can retrieved it by dialing:

✶#

In case the device ID does not exist on the ISDN line then the transfer will be returned automatically.

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5 Configuring TELES.iTA/2TR Box Functions

Aside from the standard configurations, the TELES.iTA/2TR Box offers the following special functions:

- Call Forwarding
- Personal CallBack

5.1 Call Forwarding

If a device is temporarily not available, you can forward the call to another number. The TELES.iTA/2TR Box supports unconditional call forwarding. All incoming calls will be routed immediately to the new device. The device originally called will not ring. Call forwarding can be activated in the following ways:

- By entering the source number and the destination number, i.e., the number to which calls will be forwarded (command 06).
- By entering only the destination number. In this case, the source number is the call number of the device from which the call forwarding function is activated (command 07).
- By making the other TR port of your TELES.iTA/2TR Box the destination call number.

The call forwarding function can be activated or deactivated at any time (command 08).

5.1.1 Setting Call Forwarding with Source and Destination

Determine which TR port of the TELES.iTA/2TR Box should forward calls to which destination number.
To set call forwarding, enter the following command sequence:

✶06✶PIN✶Source number✶Destination number#

The source number should be the number that you assigned to the device using the command sequence: **✶01✶PIN✶Call number#**.

Example: All calls to the number 33220 are to be forwarded to the destination number 33221. Your PIN is 01234. You would enter:

✶06✶01234✶33220✶33221#

To disable the function, enter the command sequence without a destination number.

Example: Call forwarding for the call number 33220 is to be disabled. Your PIN is 01234. You would enter:

✶06✶01234✶33220✶#

5.1.2 Setting Call Forwarding with Destination only

Using this method, you set call forwarding without entering the source number. Calls will be forwarded from the port at which you are activating the function. This function is not available, of course for remote administration.
Enter the command sequence:

✶07✶ destination number#

Example: All incoming calls are to be forwarded to the destination number 33221. You would enter:

✶07✶33221#

To forward a call to a device on the other TR port, you enter its port number:

✶07✶✶ TR port number #

Example: Your telephone is attached to port 1 and you would like to forward all calls to the port 2. You would enter:

✶07✶✶2#

5.1.3 Deactivating Call Forwarding

You can temporarily deactivate the currently active call forwarding function (command 07) by entering the command sequence:

✶08✶0#

5.1.4 Reactivating Call Forwarding

To reactivate call forwarding (command 07), you would enter:

✶08✶1#

NOTE: This will only work if call forwarding was previously set and deactivated.

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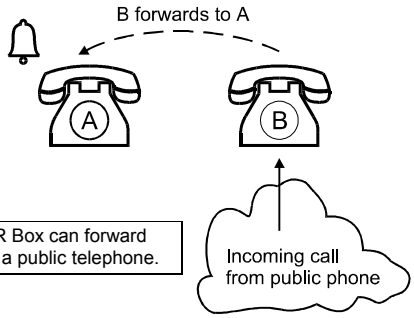
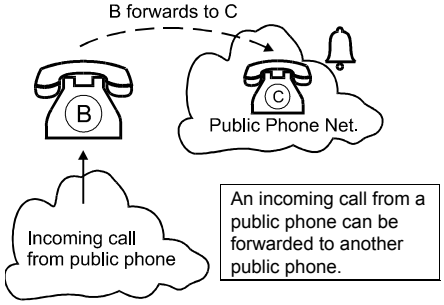
5.1.5 Call Forwarding Examples

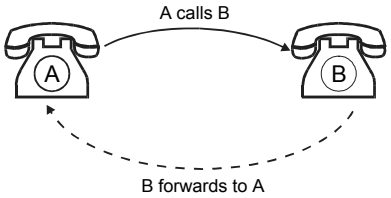
In the following examples, telephones marked A and B are attached to TR ports 1 and 2 respectively.



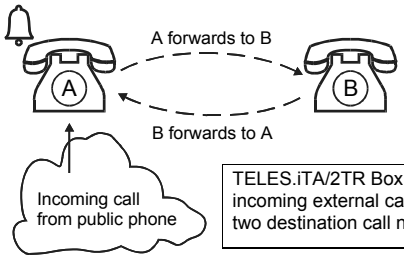
The TELES.iTA/2TR Box can forward incoming calls from a public telephone.



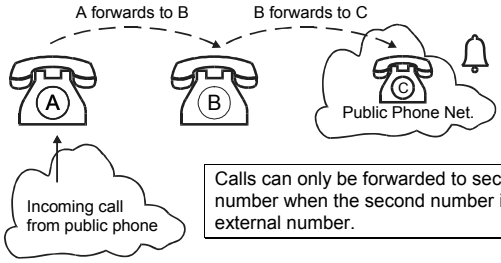
An incoming call from a public phone can be forwarded to another public phone.



It is not possible to call a phone (B) that is set to forward back to your phone (A).



TELES.iTA/2TR Box forwards incoming external calls only to two destination call numbers.



Calls can only be forwarded to second number when the second number is an external number.

5.2 Personal CallBack Server

The TELES.iTA/2TR Box offers an optimal Personal CallBack Server for making automatic collect calls. This is an ideal solution for situations in which you would like to have your telephone billed for calls made by family members, relatives, colleagues or even yourself when traveling.

The caller first calls the access number of the TELES.iTA/2TR Box. After entering a code identifying the caller to the TELES.iTA/2TR Box, the caller will be called back at a preconfigured call number. Please note that the caller can only be called back at this number. The caller is then granted an outside line by the TELES.iTA/2TR Box. If the TELES.iTA/2TR Box is attached to a PBX, the caller may have to dial for outside line access. As soon as the caller hears a dial tone, he can make a call. At the end of the conversation, he will, after waiting a few seconds, be given another outside line. The caller does not have to keep calling back the Personal CallBack Server in order to make additional calls.

All calls made by callers through the TELES.iTA/2TR Box to further parties will be charged to the TELES.iTA/2TR Box site. The caller only pays for the initial call to the access number.

5.2.1 Activating Personal CallBack Server

In order for the Personal CallBack Server to function, two B channels, i.e., both ports must be available. If one is busy, the TELES.iTA/2TR Box will not answer any calls.

The following parameters must be configured for the Personal CallBack Server:

- The access number for the Personal CallBack Server (command 02),
- Up to five **C**all**B**ack codes (**CB** codes) and numbers for return calls (commands 81, 82, 83, 84 and 85)

Further functions of the Personal CallBack Server:

- The Personal CallBack Server access is barred, all numbers configured are deleted (command 89),
- The CallBack number of the Personal CallBack Server can be changed for the respective CallBack ID (command 87).
- CallBack is activated (command 99),

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5.2.2 Access Number for Personal CallBack Server

The access number is the telephone number you call when you want to use the Personal Call-Back Server. Furthermore, this is the number to call if you want to configure the **TELES.iTA/2TR Box** remotely. For this reason, no other device is allowed to have this number! To configure the access number, enter the command sequence:

✶02✶PIN✶Call number#

Example: You want to configure the access number for the Personal CallBack Server to: 33445567. Do not enter a local area code! Assuming your PIN is 01234, you would enter:

✶02✶01234✶33 44 55 67#

5.2.3 CallBack Code and CallBack Number

A CallBack number is assigned to each CB code. The caller identifies himself by entering the CB code and is called back at the assigned CallBack number. The CB code has to contain five digits. The code '00000' is not permitted. The caller answers the call and can use an outside line granted by the **TELES.iTA/2TR Box**. The charges for the call will be billed to the **TELES.iTA/2TR Box** and not to the caller.

5.2.3.1 Setting

To set the five CB codes and the respective CallBack numbers, enter the command sequences listed below. Be sure that each CB code is used only once.

✶81✶PIN✶CB code 1 ✶ CallBack number 1#

✶82✶PIN✶CB code 2 ✶ CallBack number 2#

✶83✶PIN✶CB code 3 ✶ CallBack number 3#

✶84✶PIN✶CB code 4 ✶ CallBack number 4#

✶85✶PIN✶CB code 5 ✶ CallBack number 5#

Example: The first CB code should be set to 98765. The **TELES.iTA/2TR Box** should call back the number 030 22222. You would enter:

✶81✶01234✶98765✶030 222222#

5.2.3.2 Deleting

To delete just a single CB **number**, enter a command sequence containing only the CB code without CallBack number.

✶8x✶PIN✶CB code x ✶ #

Example: You wish to erase the third CB number. You would enter:

✶83✶01234✶98765✶#

To delete a CB **code and number**, enter a command sequence containing only the CB ID without CallBack code and number.

✶8x✶PIN✶ #

Example: You wish to erase the third CallBack. You would enter:

✶83✶01234✶#

5.2.4 Deleting Personal CallBack Destination Numbers

All CB codes and CallBack numbers can be deleted by entering a command sequence. The Personal CallBack Server is then disabled and can no longer be used. To delete all CB codes and their respective CallBack numbers, enter the command sequence listed below:

✶89✶PIN✶PIN#

Example: You wish to erase all the CB codes and CallBack numbers. Assuming your PIN is 01234, you would enter:

✶89✶01234✶01234#

5.2.5 Changing Callback Number for existing CallBack Code

In case a caller needs to make a call from a different telephone, he or she can change the CallBack number from any telephone. This feature is intended for callers who call from various different locations. In order to change the CallBack number you must know its CB code. To change the number, enter the following command sequence:

✶87✶CB Code✶CallBack number#

Example: Your code is 98765 and you want to change the CallBack number to 030 222233. You would enter:

✶87✶98765✶030 222233#

NOTE: You can only change a CallBack number for a code that was previously configured.

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5.2.6 Making a Personal CallBack Call

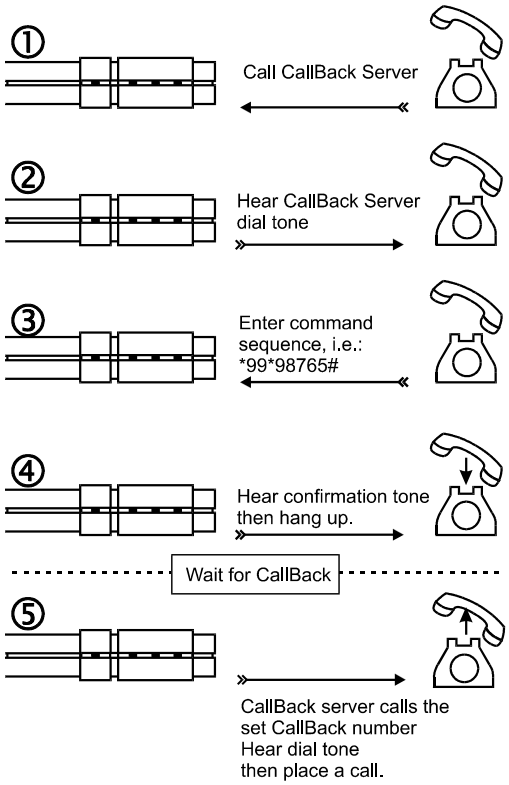
This function activates the Personal CallBack Server so that it calls the number assigned to the CB codes.

To have the Personal Call Back Server return your call, enter:

✶99✶CB Code#

Example: The following numbers have been set using the setting commands (see sections 5.2.2 and 5.2.3): the access number for the TELES.iTA/2TR Box Personal CallBack Server is 33445567, your CB code is set to 98765 and the telephone number of the device from which you are calling is 030 222222.

1. Call the CallBack Server by dialing 33445567.
2. The CallBack Server sends a dial tone.
3. Initiate the return call by entering the code ✱99✱98765#.
4. Listen for confirmation tone and then hang up.
5. The Personal CallBack Server will then return your call by calling 030 222222. After answering the call, you will hear the dial tone of the public line available to you. You may dial the desired number now. In case the TELES.iTA/2TR Box is part of a PBX, you may have to dial for outside access.



If you would like to make several calls using the Personal CallBack Server, do not hang up after finishing your first call. Simply press the ✱ # keys to terminate the call.

You will remain connected to the Personal CallBack Server; you will hear the dial tone shortly thereafter so that you can make the next call.

During a Personal CallBack connection, you cannot use any devices attached to the TELES.iTA/2TR Box. If someone picks up the receiver of the phone attached to port one, all three parties will hear a signal, and the person on port 1 will be connected to the caller. The party called will be put on hold until the party on port 1 hangs up.

5.3 Remote Administration

All the functions in column 4 marked by an ‘X’ in the “Summary of TELES.iTA/2TR Box Functions” on page 24 can be configured remotely via a telephone. To take advantage of this feature, call the access number for the Personal CallBack Server and then enter the command sequence of the function you would like to change.

If you have not yet configured an access number, please refer to section 5.2.2 page 19.

If you would like to configure several functions, wait at least 4 seconds between commands. You will hear a dial tone indicating that the TELES.iTA/2TR Box is ready for the next command sequence.

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5.4 LED Displays

There are four LEDs on the front of the TELES.iTA/2TR Box (see "Attaching TELES.iTA/2TR Box," page 3):

LED	*Color*	*Display*	*Function*	*Indicates*
Power	red	on	**Power Supply is active**	The **TELES.iTA/2TR Box** is properly attached to a power source.
Internal activity	yellow	on	**TELES.iTA/2TR Box is active**	Both B channels are busy due to internal activities (Call forwarding, Personal CallBack Server)
Port 1 or Port 2	green	off	**Device is inactive**	The device on the **ISDN line** is inactive. The telephone's receiver is, for example, off-hook.
		blinks briefly	**Call forwarding is activated**	Calls to this port will be forwarded.
		blinks	**B channel is busy**	There is a connection on the B channel.
		on	**Establishing connection**	Receiver is off-hook, but there is no connection.

5.5 Summary of TELES.iTA/2TR Box Functions

On the following page, you will find a table containing all available **TELES.iTA/2TR Box** functions. The table is divided into 8 columns. The columns have the following meaning:

Column Heading	*Contents*
1	An X indicates that the function applies only to a single TR port. To configure both ports, you must perform the configuration for each port separately.
Function	Name of the function.
Command sequence	Key combination you must enter to set the function. This can only be carried out on a touch-tone telephone. All command sequences begin with ✶ and end with **#**.
Example	An example command sequence is shown. All examples use the PIN (Personal Identification Number) 01234
Explanation	Short description of the function and the example.
2	Factory settings for the TELES.iTA/2TR Box.
3	An X indicates that the function can be configured directly at a device attached to the TELES.iTA/2TR Box.
4	An X indicates that the function in this column can be configured by an external device (remote administration). For details see section 5.3.

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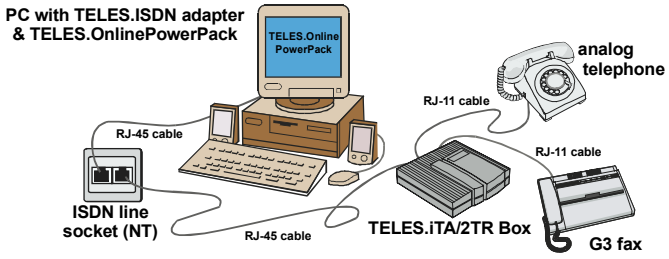
1	*Function*	*Command sequence*	*Example*	*Explanation*	*2*	*3*	*4*
X	**Call numbers for the TR ports**	*01*PIN*number#	*01*01234*335561#	Sets the call numbers for the TR ports. If a number is not configured, the port will answer all incoming calls. The call number is now set to 335561.	No number	X	
	Access number for Personal CallBack	*02*PIN*number#	*02*01234*335562#	Sets the access number for the Personal CallBack Server and for remote administration. The access is now set to 335562.	No number	X	
	Call forwarding setting	*06*PIN*source no.* destination no.#	*06*01234*335561* 030 223360#	Forwards a call from the source number to the destination number. If no destination number is entered, call forwarding is disabled. The source number must be the number of a device attached to the TELES.iTA/2TR Box.	Off	X	X
X	**Call forwarding to destination number**	*07*destination no.#	*07*0302233#	Forwards calls from the current number to the destination number. Instead of entering an external number, you can enter the alternate TR port number. Calls are now forwarded to 030 2233	No number	X	
X	**Call forwarding off/on**	*08*0|1#	*08*0#	Deactivates or activates call forwarding which was set by the command sequences 06 and 07. In the example, call forwarding is deactivated.	Off	X	
X	**Changing gain of TR port signals**	*09*1|2#	*09*3#	Changes the TR port signal gain. The higher the digit, the louder the volume. The port is now set to the loudest setting.	2	X	
	Setting CB codes and CallBack numbers	*81|82|83|84|85* PIN [*CB code*number]#	*81*01234*98765*0 30 223360#	Sets the CB code and the CallBack number. You can set up to 5 codes. In the example, the CB code is set to 98765 and the CallBack number 030/223360.	No numbers	X	X
	Changing CallBack numbers	*87*CB code*new no.#	*87*98765*030 223361#	Changes the CallBack number assigned to a particular CB code. The number is changed to new no. In the example, the new CallBack no. 030/22 33 61 is assigned to the CB code 98765.	Empty	X	X
	Deleting CallBack no.	*89*PIN*PIN#	*89*01234*01234#	Deletes all CallBack numbers and CB codes		X	X
	Changing your PIN	*90*oldPIN*newPIN *newPIN #	*90*00000*0123*01 234#	In the example, your PIN is being change from 00000 to 01234.	00000	X	X
	Device ID (1 - 8)	*92*PIN*digit#	*92*01234*2#	If you want to operate several TELES.iTA/2TR Boxes on a single ISDN line, you must assign each box a unique device ID. In the example, the device ID is set to the ID 2.	1		
	Callback	*99*CB code#	335562*99*98765#	Calls CallBack number assigned to CB code. The caller is granted a line. In the example, when the caller enters the CB code, he will be called back at the number: 030 223361.	No default possible		X
	Disconnect	##		The TELES.iTA/2TR Box emulates a telephone's disconnect key. The line is disconnected without having to hang up.		X	
	Disconnect for Personal CallBack	*#		After you call Personal CallBack, you terminate the connection using this command. You can then make another call then.			X

5.6 PC Integration using TELES.OnlinePowerPack

ISDN opens new dimensions for integrating telephony with computers. PC supported telephony is also quite simple with your TELES.iTA/2TR Box. All that you need is an ISDN board for your PC – e.g. a TELES.BRI board that also comes with appropriate software. The only prerequisite is that you attach this board to the same ISDN line as your TELES.iTA/2TR Box.



By using the TELES.OnlinePowerPack all-in-one ISDN/Multimedia applications suite included with the ISDN board, you can take full advantage of ISDN:

- The MCC program handles the dialing.
- The integrated answering machine records incoming messages. You can pick up a call in progress or call back later from the callback list (as of version 6.0).
- The ISDN device manager from TELES.OnlinePowerPack eases programming of many TELES.iTA/2TR Box functions: you can program and manage almost all functions more comfortably by using the PC rather than the telephone.
- Furthermore, the ISDN device manager offers comprehensive statistics. It registers incoming and outgoing calls for any individual port and records charge units of outgoing connections.

This is possible, thanks to a concept developed by TELES – the TELES.Family concept. It unites TELES terminal devices to complete, PC integrated communication systems for the office and the home. Each device attached to your ISDN line will have to be assigned a unique device ID (see “Set Device ID,” page 9).

TELES.BRI boards and TELES.OnlinePowerPack are available in computer stores or directly from TELES.

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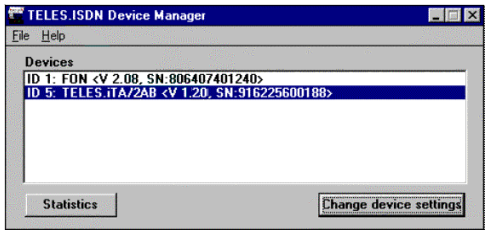
5.6.1 TELES.ISDN Device Manager

After you start the program, you will see the following window. In the **Devices** list box, you will see all the devices attached along with their device IDs, firmware versions and serial numbers.

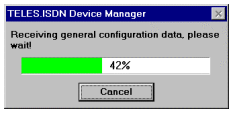


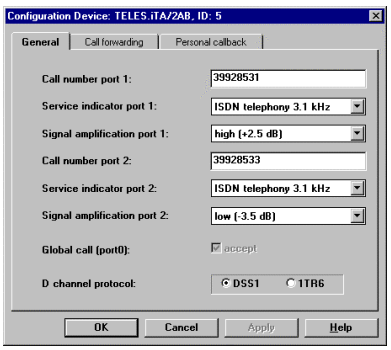
5.6.2 Software Settings

Select the TELES.iTA/2TR Box displayed from the list box by clicking it with the mouse. Click on the **Change device setting** button and you will then be prompted to enter the PIN.

NOTE: If your PIN still has the factory setting (00000), you will receive a message reminding you that you cannot make any configurations with this PIN. Set the PIN using an attached telephone and proceed with the software configuration.

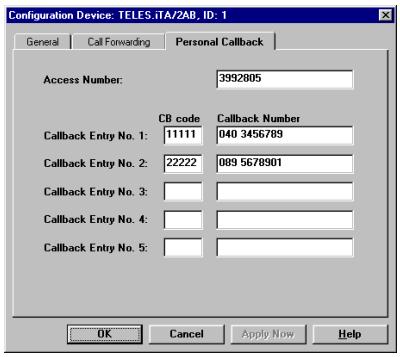
After you have entered the PIN, your TELES.iTA/2TR Box will in turn transfer its data to the configuration program, and a dialog box containing three sheets: **General, Call Forwarding and Personal CallBack** will appear.





On the **General** sheet, you can set the call number, the service indicator, and the signal gain for each port as well as the D channel protocol .

On the **Call Forwarding** sheet, you can enter the call forwarding destination numbers for each port. You enable call forwarding by clicking on the **active** check boxes. When you check the **internal (Port)** option the call forwarding is to the other port and you must enter the port number as the destination number.



For **Personal CallBack Server**, you will see an additional sheet in which you can enter the access number. You will then be able to enter individual CB codes and CallBack numbers. as pictured on the left.

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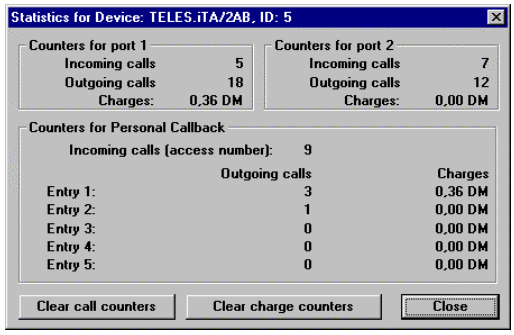
5.6.3 Statistics

The **TELES.ISDN Device Manager** not only allows you to easily configure your TELES.iTA/2TR Box, but also displays statistics. The statistics can only be accessed through the software.



A counter for all incoming and outbound calls is maintained for each port. Additionally, the software displays the total charges for all outbound calls. The same information is displayed for all calls through the Personal CallBack Server.

A click on the **Clear call counters** button deletes the counters for incoming and outbound calls, i.e., sets them to 0. Similarly, a click on the **Clear charge counters** button will reset all displayed charges.

6 Appendix

6.1 Technical Data

Technical data of TELES.iTA/2TR Box	
External power supply	12 Volt, 9 Watts
Interference suppression	complies to CE0188X
Dimensions LWH [in mm]	133x143x38
D channel protocol	DSS1 in point-to-multipoint lines.
Max. no. of devices on each TR port	3

6.2 R key

If your analog telephone is equipped with an R key, it will not function properly if it is set to *ground*. Pressing the key would terminate the current connection. The recommend setting for the R key is a *flash* time of 90 ms. For details on how to make this setting, please refer to your telephone's manual.

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6.3 Troubleshooting

In case you do not hear a dial tone on your terminal device (i.e. telephone), you can help isolate the problem by going through the following steps:

Does the status LED light up as soon as you lift the receiver?

Yes Your telephone is properly attached. But do check the cable to the ISDN line.

No Check that the RJ-11 cable is securely plugged into the TELES.iTA/2TR Box and the telephone.

When you lift the receiver, you do not hear a dial tone.

Cause A Personal CallBack connection or Call forwarding is in progress. The yellow LED is lit.

Solution Wait until the connection has been terminated and try again.

Telephone does not ring for incoming calls; outgoing calls are possible though.

Cause You've entered the incorrect number for your own number.

Solution Reenter the number found in the documents you received from your local telephone company.

6.4 Customer Support

International Help Desk		
TELES Ireland Ltd. Unit 3, Distribution Centre, Shannon Airport Free Zone, Co. Clare IRELAND	Phone*) E-Mail Support: E-Mail Sales: World Wide Web:	+353 (61) 716 716 support@teles.ie sales@teles.ie http://www.teles.ie

Local Help Desks		
TELES AG Dovestrasse 2–4 10587 Berlin GERMANY	Phone*) Fax: World Wide Web:	0190/871101 (3.63 DM/min Germany only) +49 (30) 399 28 01 http://www.teles.de
TELES Benelux BV De Lasso 70 NL-2371 GZ Roelofarendsveen THE NETHERLANDS	Phone*) Fax: World Wide Web:	0900 2027777 (105 cpm) +31 (71) 331 7174 http://www.teles.nl
TELES Italia SRL Via die Platani 6 I-20020 Arese (MI) ITALY	Phone*) Fax: World Wide Web:	+39 (02) 93777 100 +39 (02) 93777 101 http://www.telesitalia.it

*) Available Monday through Friday from 8.30 a.m. to 6 p.m.

Return Material Authorization (RMA)
Should it become necessary to return the product to TELES AG for any reason, please contact the international support line to obtain a Return Material Authorization Number (RMA). Returned items will only be accepted if a RMA has been visibly placed on the outside of the return package. The product must be returned in suitable packing materials.

§ 6 Return of Goods
The return of goods shall be accepted only if the package clearly shows a Return Material Authorization Number ("RMA Number"). Seller issues the RMA Number on Buyer's written request, after a careful examination of the right to return material. Returned products have to be properly packed.

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6.5 User Contract

The TELES.iTA/2TR Box contains computer programs that are protected by copyright law. Illegal use of these programs may result in civil and criminal penalties. The accompanying user manual and the hardware supplied with the program are also protected by copyright law. As sole owner of these products, TELES reserves all proprietary rights of use.

Warranty / Liability

1. The Seller gives the Buyer the guarantee to remedy a defect of the TELES.iTA/2TR Box within 6 years after delivery or, if this is impossible, make a substitution free of charge. This warranty is terminated if the Buyer or any third party has modified or attempted to repair the hardware or software. The liability of the Seller does not cover damages due to natural wear and tear, improper handling or operating errors
2. The Buyer shall inform the Seller in writing within 14 days of acquisition about apparent defects and return the faulty merchandise to the Seller.
3. Software defects can be repaired only if they can be reproduced. The Seller shall remedy only such software defects that substantially affect the promised use.
4. If the repairs or substitutions mentioned above in section 1 are not carried out or are impossible, the Buyer is entitled, at his option, to rescission or abatement.
5. The foregoing paragraphs are the sole and exclusive provisions regarding the warranty. They do not preclude, however, quality guarantees that protect the Buyer against risk of consequential damages.
6. In no event shall the Seller be liable for consequential damages unless resulting from malicious faults or negligence. The Seller shall not be liable for damages caused by vicarious agents. The Seller is only responsible for damages covered by the manufacturer's liability insurance. Product liability claims regulated by the pertinent national product liability laws remain unaffected by these terms.
7. Legal venue for all obligations and liabilities arising out of this agreement shall be the head office of the Seller.

6.6 Glossary

Term	*Explanation*
B channel	*Bearer Channel*. An ISDN channel for data transmission allowing up to 64kbps. The Basic Rate Interface (BRI) consists of two such channels.
Call forwarding	A call that is directed to phone A is routed unconditionally to phone B. Every time a call is made to A, phone B rings instead.
Call holding	The ability to talk to a third party while still being connected to the first. The first party is said to be 'on hold'.
Call transfer	You receive an incoming call and transfer it to another party.
CAPI	*Common ISDN Application Programming Interface*. The software interface between your ISDN device and PC. There are at present two versions available: CAPI 1.1 and CAPI 2.0. TELES offers two versions: Dual-CAPI 1.1 + 2.0 and CAPI (32bit for MS-Windows).
CB code	*CallBack code.* Five-digit code that must be entered in order to activate the Personal CallBack Server function.
CLI	*Call Line Identification* - a BRI board attached to the same ISDN line as the TELES.iTA/2TR Box can identify all calls made to the TELES.iTA/2TR Box.
D channel	ISDN channel used for call signaling. It allows data rates of up to 16kbps.
D channel protocol	Protocol for ISDN signaling. In Europe, the DSS1 protocol is standard.
DSS1	The European standard protocol (Euro-ISDN or ETSI). You can only use terminal devices on the ISDN line that were designed for this protocol
DTMF	*Dual Tone Multi Frequency*. Also known as touch-tone dialing. Only phones capable of touch-tone dialing can be used to configure TELES.iTA/2TR Box settings and functions.
ISDN	*Integrated Service Digital Network.* The digital telephone network
Jack	A female socket for plugs such as the RJ-11 or the RJ-45
LED	*Light Emittance Diode*. The 4 small "lights" on the front of the TELES.iTA/2TR Box case. LED
MSN	*Multiple Subscriber Number.* In the DSS1 protocol of Euro-ISDN, a subscriber is provided several numbers (MSNs) which he can freely assign to his terminal devices.
PBX	*Private Branch Exchange*. An internal, not public, telephone switching system.

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Term	*Explanation*
Personal CallBack	Feature allowing authorized callers to be called back by a Personal CallBack Server. The caller is then granted a line on which he or she can make calls that are charged to the telephone number of the Personal CallBack Server.
PIN	*Personal Identification Number.* Special numerical code which functions as a password.
Provider	Someone who offers services, such as Internet access, over public telephone lines.
Pulse dialing	Older procedure for transmitting telephone numbers also known as rotary dialing. This procedure can only support digits and not characters like ✱ (tone) or # (flash).
RJ-11 connector	Plug frequently used to attach analog devices. The plug is made of clear plastic and has 4 contacts of which two are used for telephony.
RJ-45 connector	Plug used primarily for attaching ISDN devices. It is very similar in appearance to the RJ-11 connector but larger and has 8 contacts of which 4 are used for ISDN.
S/T interface	*ISDN network terminator* or ISDN basic rate interface. The ISDN bus is attached to it. This is the 4-wire cable to attach your ISDN devices.
TA	*Terminal Adapter.* See T/R port.
T/R port	*Tip&Ring.* It is an analog port to ISDN that allows you to attach your non-ISDN devices (telephone, modem, fax G3 etc.) to the ISDN line. This either can be an external device or integrated into the ISDN device itself. On TELES hardware the T/R ports are sometimes labeled 'AB'
TR port US standard	See T/R port. According to the US standard, the inner two wires of the RJ-11 plug are used.

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