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TA+P2I

Adapting ISDN Phones to POTS FXS

User Manual

Release r04

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1 Introduction

We are very pleased to see that you have purchased a Stollmann product and would like to express our appreciation.

This documentation is valid for the following product: TA+ P2I

- Software Version V1.700 or later

1.1 Product description

Using the TA+P2I you can connect ISDN phones or an ISDN PABX with two analogue interfaces (POTS FXS).

The analogue lines of the TA+P2I react like standard analogue phones und have to be connected with the FXO ports of the switching system or adapter.

The ISDN interface has identical function equal to an ISDN interface presented by an NT1 or a PABX.

You can connect up to 8 ISDN phones to the ISDN interface whereas up to 4 ISDN phones can be powered by the TA+P2I.

ISDN Modems for data transmission and ISDN Fax machine Group 4 cannot be driven by the TA+P2I

2 Installation

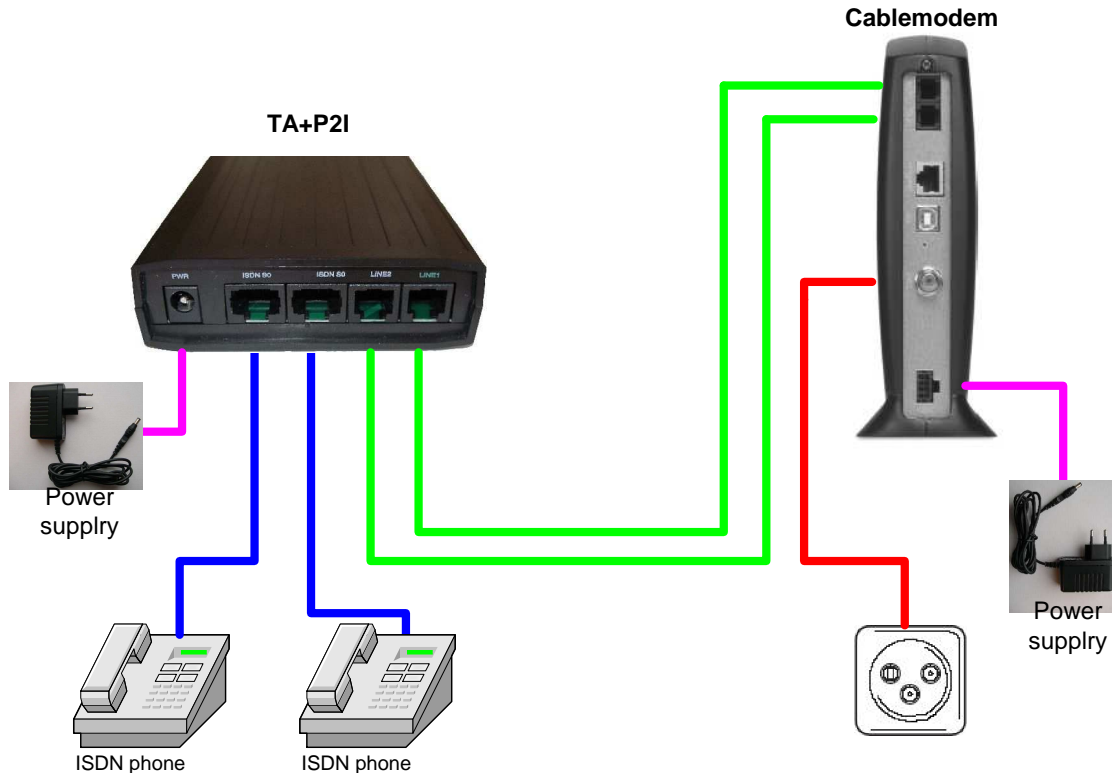
2.1 Content

This package contains the following parts:

- TA+P2I Adapter
- External power supply
- Two cable for the analogue interfaces
- This manual
- Quick installation guide
- etc.

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2.2 Procedure of Installation for ISDN phones



The installation of your TA+P2I is done in a few simple steps:

- Connect the power supply to the TA+P2I and mains: the green LED “READY” at the front panel will be lit.
Attention: Please use only the delivered power supply!
- Connect „LINE 1“ with the first analogue line, LINE 2 with the second one. The corresponding LEDs LINE1 and LINE2 will be lit green.
- Connect the ISDN phone(s) to one or both ISDN plugs. As an alternative you can connect the previous installed ISDN cabling to one of the ISDN plugs.

Note: the ISDN terminating resistors for the ISDN network are integrated inside the TA+P2I already.

- Check whether you can receive calls using all called numbers. If you have problems please proceed as follows:
 - If one ISDN phone shall react on all incoming calls from both lines it is necessary to delete all still activated MSN settings inside the ISDN phone.

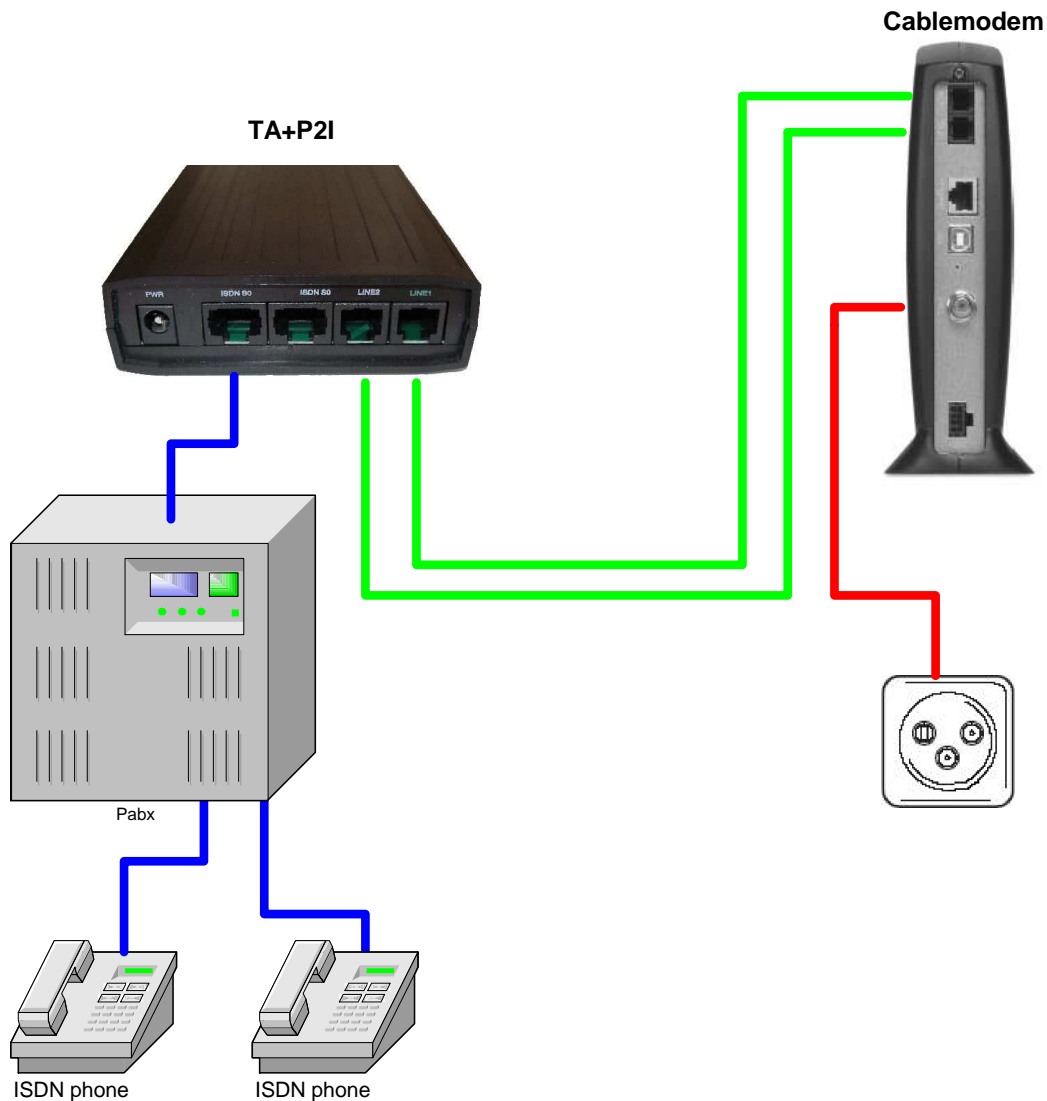
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- If one ISDN phone shall react only to the phone numbers of one of the analogue lines of the cable modem, change the former MSN settings and use the digit "1" as MSN for that phone, which shall react on incoming call from line 1. Please handle the same way for the ISDN phone that shall be allocated to line 2, this phone needs the digit 2 as MSN setting.
- Example:
 - For Line 1 was associated the call number 123123123 and for Line 2 the call number 456456456
 - If an ISDN phone shall only accept incoming calls for the number 123123123, set up the MSN of this phone to „1“.
 - If another phone shall react on incoming calls to 456456456, set up the MSN of this phone to „2“.
 - If a third phone shall react on all incoming calls, so delete all MSNs of that phone.
- More information you can find in your phone manual. If you have problems setting up MSNs please contact your dealer or the manufacturer of the phone.

More setups you will find in the next chapter.

2.3 Procedure of Installation for ISDN PABX



To use the TA+P2I please take the following steps:

- [1] Connect the power supply to the TA+P2I and mains: the green LED "READY" at the front panel will be lit permanently.

Attention: Please use only the delivered power supply!

- [2] Connect „LINE 1“ with the first analogue line, LINE 2 with the second one. The corresponding LEDs LINE1 and LINE2 will be lit green.

- [3] Connect the public line port of the PABX to one ISDN plug.
Note: the ISDN terminating resistors for the ISDN network are integrated inside the TA+P2I already.

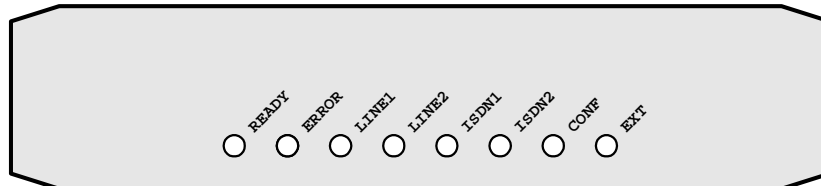
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- [4] For accepting incoming calls with the correct calling number, you have to set up the MSN inside the ISDN PABX:
Set up the MSN of your ISDN PABX as they are signaled by the TA+P2I: per default the MSN "1" for the analogue line 1 and the MSN "2" for the analogue line 2.

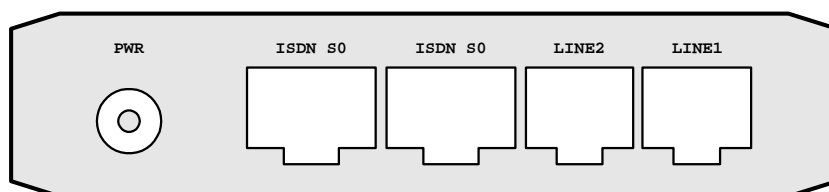
More setups you will find in the next chapter.

2.4 Displays



READY	The TA+P2I is powered and ready to use
ERROR	Hardware-Error, the TA+P2I cannot be used
LINE1	The analogue line 1 is connected to a working analogue interface
LINE2	The analogue line 2 is connected to a working analogue interface
ISDN1	The first B channel is in use
ISDN2	The second B channel is in use
CONF	The configuration of the TA+P2I has been changed
EXT	Reserved

2.5 Interfaces



LINE1	Interface for the first analogue line
LINE2	Interface for the second analogue line
ISDN S0	First plug for ISDN devices
ISDN S0	Second plug for ISDN devices
PWR	Interface for external power supply ! Attention: just use the delivered power supply !

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3 Usage of the TA+P2I

By adapting with the TA+P2I you can use many supplementary services known from the ISDN also via the analogue lines, the services have to be activated on the analogue lines.

The TA+P2I supports the following supplementary services:

- Outgoing call including transmission of calling party number
- Calling line identification restriction
- Incoming call including display of calling party
- Call Waiting
- Call Hold
- Three party conference (3PTY)
- Barring incoming calls
- Terminal Portability (TP)
- Call forwarding (CFU, CFB, CFNR)

More services may be available depending on the characteristics of the analogue lines, these can be driven from the ISDN phone transparently by key inputs.

3.1 Incoming call

An incoming call will be shown via the ringing tone and the calling number display as if the ISDN phone would be connected to the ISDN network directly.

To route the incoming calls to the addressed ISDN phones it is necessary to set up the MSN of each ISDN phone.

By factory the associated MSNs for the two analogue line are set to 1 (line1) and 2 (line2). For using the factory setting set up the MSN of your phones accordingly (1 or 2)

For experts only:

If a phone number according to the call number of the analogue lines shall be used, you have to set up this correct MSN both in the TA+P2I and the ISDN phones.

To change the setting for the MSN for analogue line 1 please do the following:

- Please enter the following number in on hook state of the ISDN phone

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- **00000101xxx** = Set the first MSN for analogue line No. 1 to xxx (factory default 1: „Dialing 000001011“)
- Go off hook
- Go on hook.

Please proceed adequate for the second analogue line, please dial instead:

00000102xxx = Set the first MSN for analogue line No. 2 to xxx (factory default 2: „Dialing 000001022“)

Two additional MSNs can be programmed for each line accordingly by using other dial codes (see chapter Configuration).

3.2 Outgoing call

An outgoing call will be started identical as if the ISDN phone would be connected directly to the ISDN network via the menu and the keys of the ISDN phone.

The MSNs entered in the ISDN phone and the TA+P2I define the analogue interface (LINE 1 or LINE 2), that will be used for the outgoing call. If no MSN is defined either in the TA+P2I or the ISDN phone the first analogue line will be used always.

To make an outgoing call with calling line restriction please use the menu user interface of the ISDN phone. The signaling sequence will be adapted automatically by the TA+P2I.

Note: The ISDN phone can display „connected“ although the connection has not been established fully. This is a feature and no bug.

3.3 Call waiting

Call waiting will be signaled as if connected to an ISDN network. The display text and tone signaled is dependent on the configuration of the ISDN phone and will be shown according to the ISDN phone features and settings (typical by an acoustic tone and a display entry).

3.4 Call Hold / Enquiry

You can start an enquiry by the typical sequence as usual for the ISDN phone (menu key or R key).

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3.5 Three party conference

You can start a three party conference by the typical sequence as usual for the ISDN phone (menu driven).

3.6 Call forwarding

You can activate and deactivate call forwarding by the typical sequence as usual for an analogue line by prefix codes. These codes are predefined by your service provider (i.e. *21*<Rufnummer>#).

Activation and deactivation by the menu keys is only possible with some ISDN phones, mainly the deactivation of call forwarding is eventually not possible.

3.7 Additional supplementary services

Additional services like call completion to busy subscriber, call transfer, etc. are not available via the menu driven interface of the ISDN phone. These services are defined by the services of the analogue lines and are controlled by keypad input (DTMF tones). The display information of the ISDN phone is also not available.

Please refer to the services supported by your provider of the analogue lines.

4 Diagnostic

4.1 Error: phone calls not possible

Is the READY LED lit green?

If not, please check, whether the delivered power supply is adapted correctly. Disconnect the power supply for several seconds. Is the READY LED still off or is the ERROR LED lit, the device has a hardware error. Please contact your supplier.

Is the LINE1 LED lit green?

If not, please check the connection between the plug LINE1 and the analogue port.

Is the LINE2 LED lit green?

If not, please check the connection between the plug LINE2 and the analogue port.

Is the MSN programmed in the ISDN phone also programmed in the TA+P2I?

Check the setting of the MSNs in the ISDN phone and the TA+P2I. Please refer to the chapter outgoing call.

4.2 Error: Only busy tone heard

Is ISDN1 or ISDN2 lit, when you go off hook with the handset of the ISDN phone?

Check the connection between the TA+P2I and the ISDN phone.

4.3 Error: no incoming calls

Is the setting of the MSN correct?

Check the setting of the MSN in the ISDN phone and the TA+P2I. Please refer additionally to chapter incoming call.

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5 Configuration

5.1 Overview Configuration commands

Every configuration command has to be dialed en-bloc from the ISDN phone: enter the configuration dial number, go off hook and go on hook.

Set up 1. MSN xxx for Line1: **00000101xxx**

Set up 2. MSN xxx for Line1: **00000111xxx**

Set up 3. MSN xxx for Line1: **00000121xxx**

Set up 1. MSN xxx for Line2: **00000102xxx**

Set up 2. MSN xxx for Line2: **00000112xxx**

Set up 3. MSN xxx for Line2: **00000122xxx**

Set up Date and Time: **00000103ddmmyyhhmm**

Reset all parameter to factory default: **00000980**

5.2 Technical features

Function	TA+P2I
POTS interfaces	
Plug	2 x RJ11
Ringling detection	20 to 50 Hz
Off-Hook / On-Hook signaling	X
DTMF dial	X
Barring incoming call	X
CLIP detection (FSK)	X
Detection busy tone	X
ISDN interfaces	
ISDN interface	1 x I.430 LT-S mode (S-Bus, BRI)
Plug	2 x RJ 45
Terminating resistors	2 x 100 Ohm
Phantom feeding ISDN-Bus	2,5 Watt
Supplementary services TA+P2I	MSN, DDI, Call Waiting, Hold, Resume, Three Party Conference, Call Forwarding
Supplementary services transparent using DTMF	All available on analogue line
D channel protocol	DSS1 LT-S mode
Interfacing Modes	Point to Point and Multipoint
B channel	G.711 a-law (analogue voice)
Configuration	
Power Supply	Block dial via ISDN-phone
Dimensions	External plug in power supply
CE Conformity	127 x 88 x 27 mm
	CE Europe

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