SETUP Help for the ACOTEC connectivity products

ISDN Router

ConnectGate

Ras

ISDN Router

Installation

- Router configuration option for IP and IPX
- WAN adapter configuration
- Controller configuration
- LAN adapter configuration
- X.31 configuration
- Configuring a link to your Internet Services Provider

Instructions for configuration

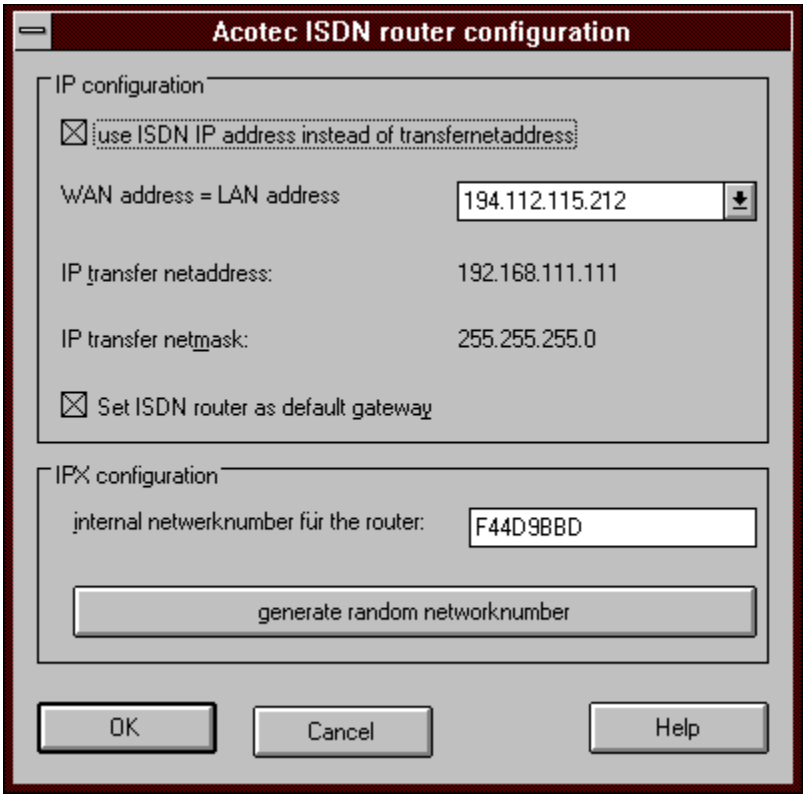
Configuration of new ISDN adapters (WAN adapters)
Configuration of new LAN -adapters
Uninstalling the ISDN MPR

Router configuration option for IP and IPX

- IP configuration without IP address mapping
- IP configuration with IP address mapping
- IPX configuration

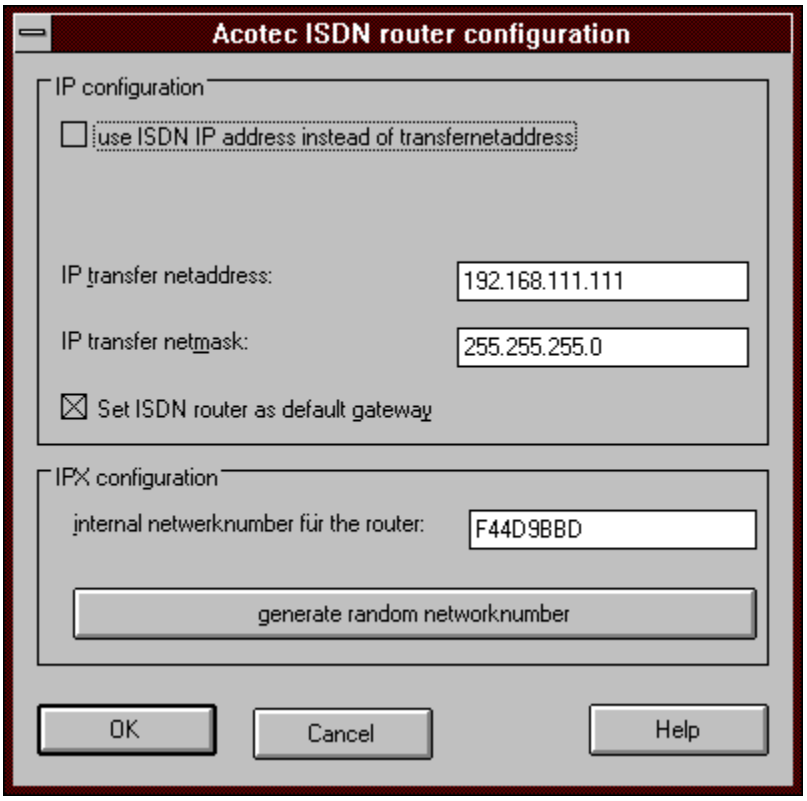
IP configuration with IP address mapping

If suitable LAN adapter addresses are available in your system, the *Use LAN Adapter Address as WAN Originator Adress* check box in the IP Configuration dialogue box is ticked. You can select a LAN adapter address from the DropDown list under*WAN Address = LAN Address* or you can accept the one proposed.
If you want to switch off IP address mapping, disable the *Use LAN Adapter Address* check box.



IP configuration without IP address mapping

If the *Use LAN Adapter Address* check box is not enabled, specify the IP address for the ISDN router in this dialogue box. Two consecutive IP addresses are required for the installation of the ISDN router.



Use LAN Adapter Address as WAN Originator Address

This check box is ticked as standard if there are suitable LAN-adapter addresses in your system. This switches on IP address mapping.
Disable the check box if you wish to switch off IP address mapping.

WAN address = LAN address

This DropDown-Box is displayed only if IP address mapping is switched on. You can use the displayed LAN adapter address as the WAN address or select another from the DropDown box.

Transfer-network address

If IP address mapping is switched on, the router is automatically allocated a transfer-network address. This is displayed here.

Transfer-network mask

The subnet mask for the transfer-network address is displayed here.

IP Address

You need two consecutive IP addresses for the ISDN MPR. Input the first of the two IP addresses here

Subnet Mask

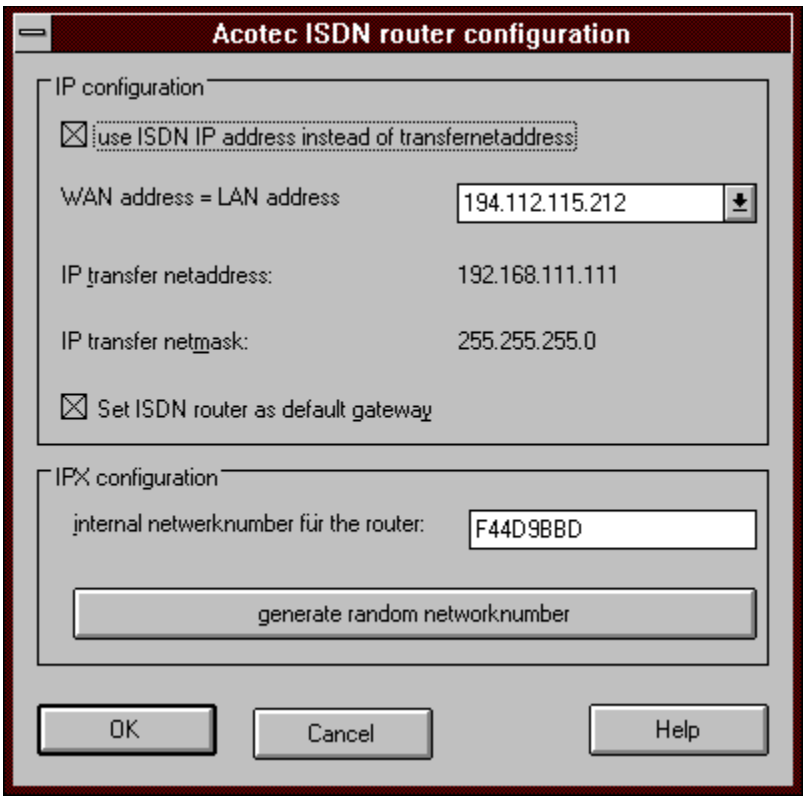
Input the subnet mask for the IP address. You can also leave this field empty: the subnet mask will be entered into it automatically.

Set ISDN Router as Default-Gateway

Setting this flag causes a default gateway to be set automatically for the ACOTEC MPR gateway driver. You can find the ACOTEC MPR gateway driver in the TCP/IP configuration .

IPX Configuration

The fields for IPX configuration are shown in this dialogue box only if IPX is installed on your system and you are currently configuring an ISDN MPR. When you are configuring an IPR, these fields are not displayed.
Specify here the IPX number for the ISDN MPR.



Internal Network Number for the MPR

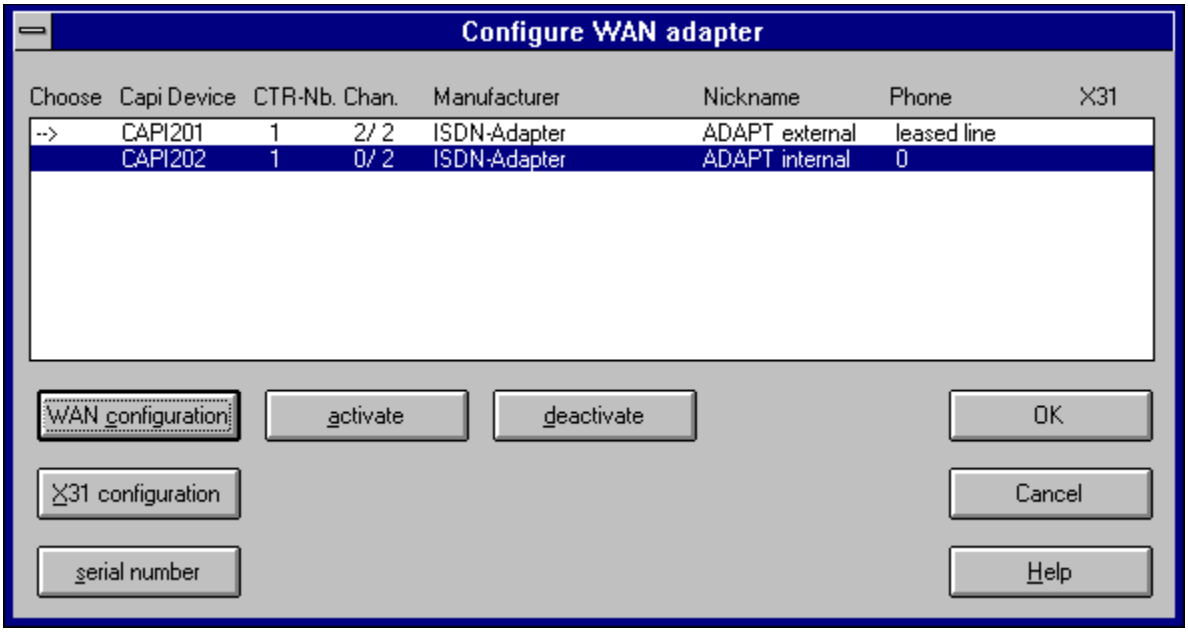
When this window is opened, a randomly generated IPX number for the MPR is displayed. You can either allocate an IPX number yourself or ask for another IPX number to be generated (click on "generate random network number"). If you allocate an IPX number yourself, you must ensure that that number is allocated to the ISDN MPR alone.

Generate IPX Number for ISDN MPR

Click on this field to ask for an IPX number to be generated for the ISDN MPR. The number that is generated is guaranteed to be allocated to the ISDN MPR alone.

WAN adapter configuration

This dialogue box displays all adapters through which networks are connected (network cards and ISDN adapter cards).
To configure, enable or disable an adapter, select the appropriate entry.



Selection

This column shows whether or not the selected adapter is enabled. If the adapter is enabled, network connections will be made via this adapter.

Capi Device

This column shows the designation of the adapter within the network.

CTR No.

This column shows the number of the controller through which the B-channels are provided.

Channels

This column shows how many of the available B-channels are being used by the ISDN MPR.

1/2 *- One of the two available B-channels is being used by the ISDN MPR.*

Manufacturer

This column shows the manufacturer to assist identification of the adapter.

Alias

This column shows the alias of the adapter. This name may have been input when the adapter was installed in order to identify it unambiguously where there are several adapters of the same type.

Telephone Number

This column shows the ISDN number of the adapter. The ISDN number can be specified or changed using the command "Configure". The installation of the ISDN MPR can only be successfully completed when this number has been input.

Modem operation

If you also wish to enable modem operations with your MPR, set this flag. A prerequisite here is that your ISDN card provides modem functions.

Enable

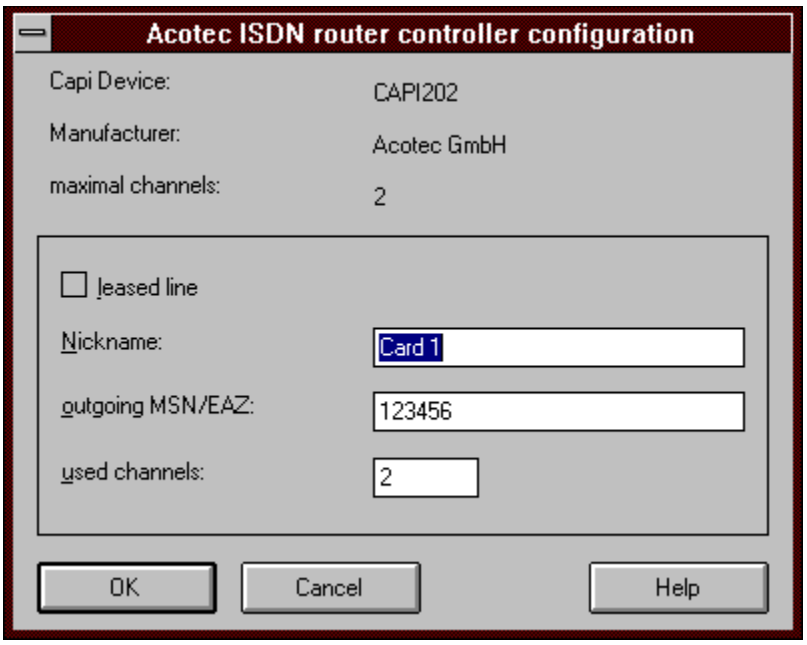
The selected adapter is marked with an arrow (-->) in the "Select“ column and is available for connecting networks.

Disable

The selected adapter is disabled, i.e. the arrow in the "Select" column is removed and the adapter is no longer available for connecting networks.

Controller configuration

This dialogue box displays the adapter designation, the manufacturer and the number of B-channels made available. If your ISDN card is not able to make fixed connections, the check box labelled "Fixed Connection“ is not displayed. You can choose from the following input options:



Fixed Connection

This check box is displayed only if the ISDN card is able to make a fixed connection.
If you want to set up a fixed connection, select this check box. The field labelled "Telephone Number“ will then show "Fixed connection“. This entry cannot be changed.

Alias

You can input an alias for the adapter.

Telephone Number

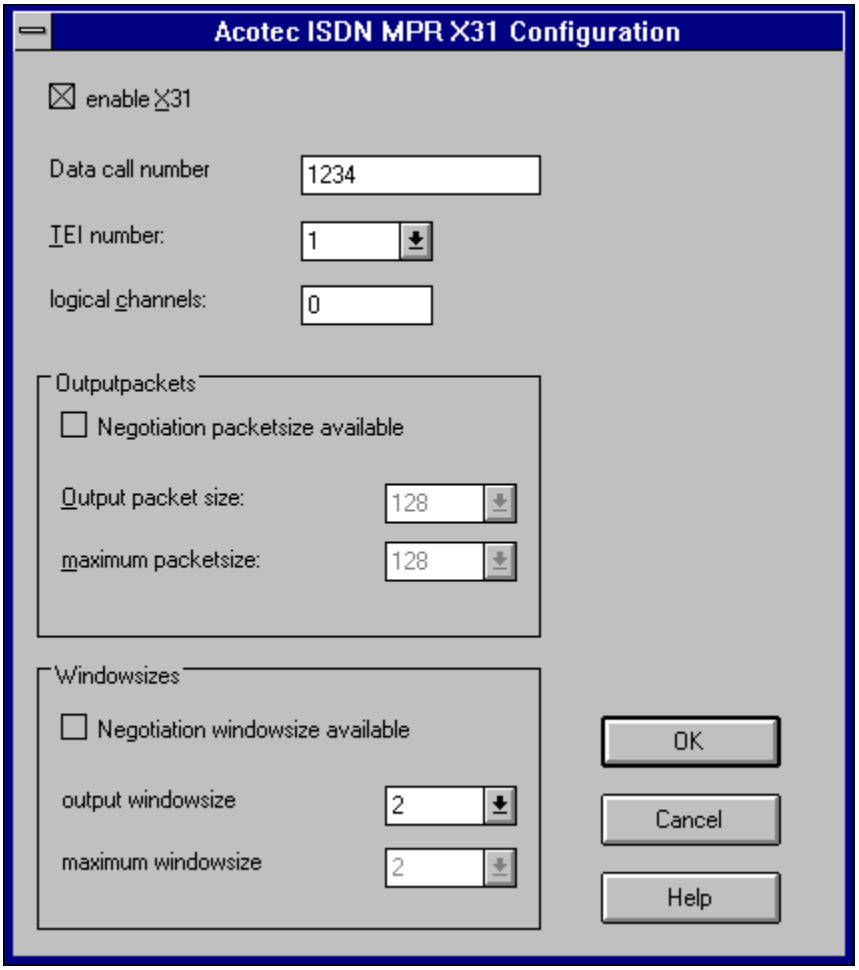
Input the ISDN number of the ISDN adapter. This input is required if networks are to be connected via ISDN.
If you have selected the "Fixed connection“ option, the words "Fixed connection“ are shown here and cannot be changed.

Channels for MPR

Input how many of the available B-channels are to be used for the ISDN MPR.

X.31 Configuration

If you have access to an X.25 network via your ISDN connection, you can configure this service in the present dialogue box.
Select the X.31 option by clicking on the check box "use X31“, and all the fields of the dialog box will be displayed.



X.31 Option

If you have selected the X.31 option by clicking on this check box, the dialogue box will be displayed, complete with all its fields.

Data Number

In this field, input the number that you have had installed for gaining access to an X.25 network.

TEI (Terminal Endpoint Identifier)

The TEI number is notified to you by the network operator from whom you have ordered access to an X.25 network via your ISDN connection.

Number of Channels

Enter in this field the number of logical channels per TEI. This value depends on the X.25 network operator.

Negotiate Packet Size

The "Negotiate Packet Size“ service must be ordered explicitly in your order for the X.25 connection. If your X.25 connection has this service, you can set this flag. This enables the fields "Outgoing Packet Size“ and "Maximum Packet Size“.

Outgoing Packet Size

You can enter a value in this field only if you have set the Negotiate packet size flag. The packet size is stated in bytes. Outgoing Packet Size is used as the packet size if there is no negotiation or the distant terminal supports no other size. Outgoing Packet Size must not be greater than Maximum Packet Size.

Maximum Packet Size

You can enter a value in this field only if you have set the Negotiate packet size flag. The packet size is stated in bytes. The maximum value you can input here is 256. If the Negotiate Packet Size flag is set and the distant terminal supports the maximum packet size, data will be sent in packets of this size.
Maximum Packet Size must not be less than Outgoing Packet Size.

Negotiate Window Size

The window size is defined as the maximum number of packets that can be sent without being acknowledged. Once this number has been reached, a packet can be transmitted only after a transmitted packet awaiting acknowledgement has been acknowledged.
Negotiable Window Size is a service that must be explicitly ordered. If this service is available, the "Negotiate Window Size“ flag can be set.
If this service is not ordered, the standard window size is 2.

Outgoing Window Size

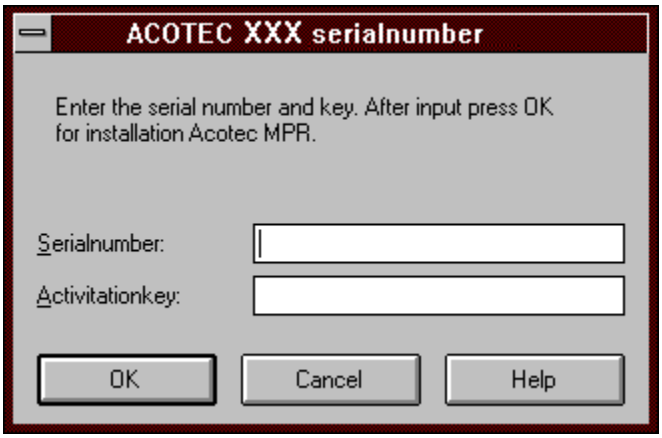
This field is enabled only if the Negotiate Window Size flag is set. Outgoing Window Size is the standard window size used if window size is not negotiated.

Maximum Window Size

This field is enabled only if the Negotiate Window Size is set. The maximum value that can be input here is 7.

Serial Number

Enter in this dialogue box the serial number and key of your ISDN MPR.



Serial Number

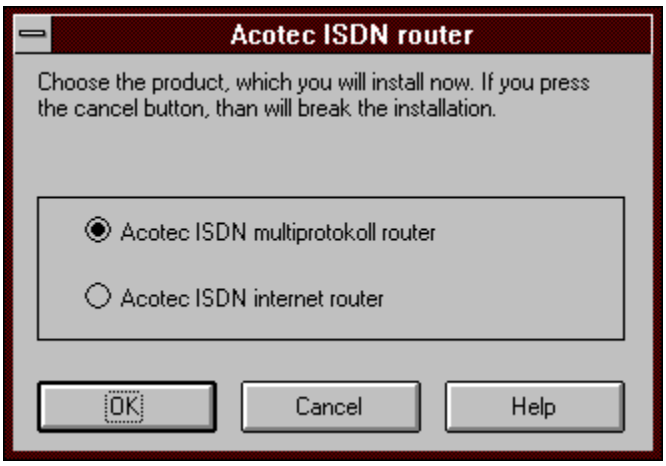
You can find the serial number on the sticker on the fourth cover page (reverse) of the booklet. The booklet is inside the CD case.

Key

You can find the key on the sticker on the fourth cover page (reverse) of the booklet. The booklet is inside the CD case.

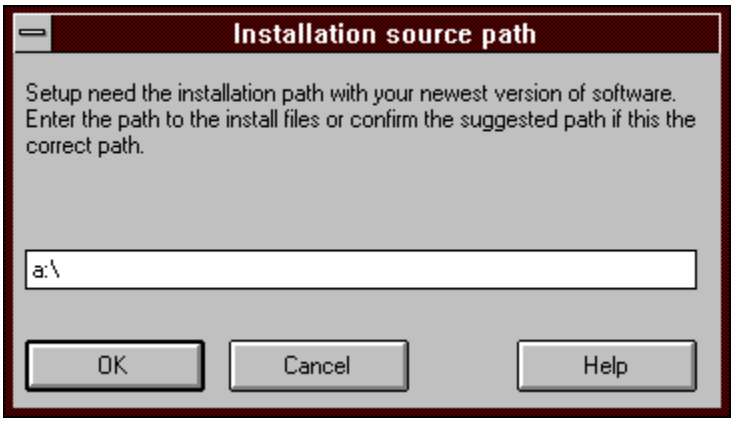
Product Selection

If the serial number or activating password that you entered were incorrect but you still want to continue the installation, you have to specify in this dialogue box what product you wish to install - the ISDN IPR or the ISDN MPR.



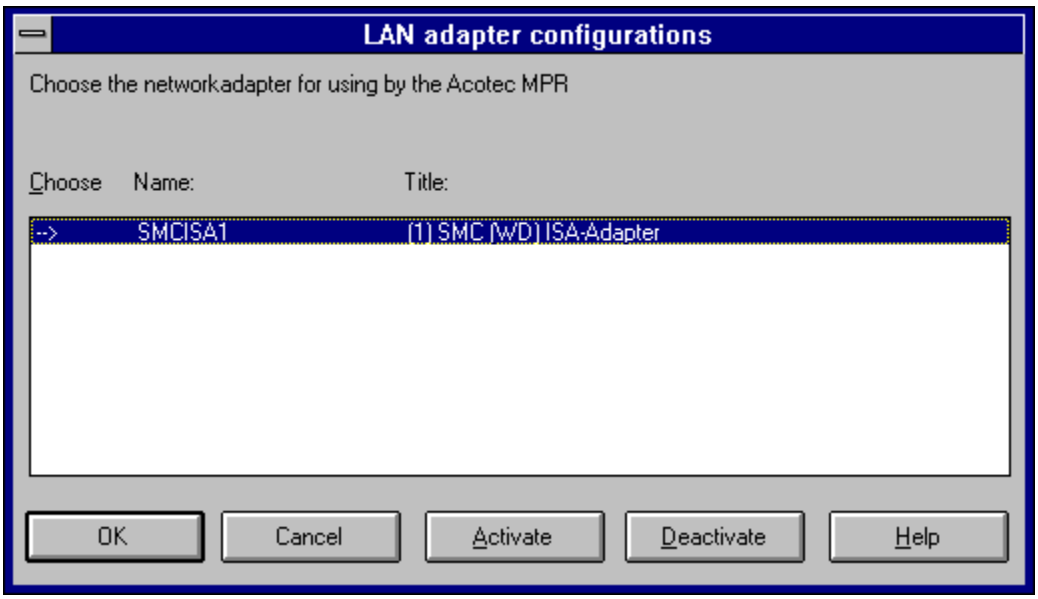
Path for installation files

Enter here the path to the installation files, or confirm the suggested path.



LAN Adapter Configuration

Select in this dialogue box the network adapters of those LANs which will be allowed to communicate via the ISDN MPR.



Selection

This column shows whether or not the selected adapter is enabled. If the adapter is enabled, network connections will be made via this adapter.

Adapter Name

The adapter name shown in this field corresponds with the service name for that adapter in the Windows NT Registry.

Title

This column shows the name that was allocated to this adapter during installation.

Enable

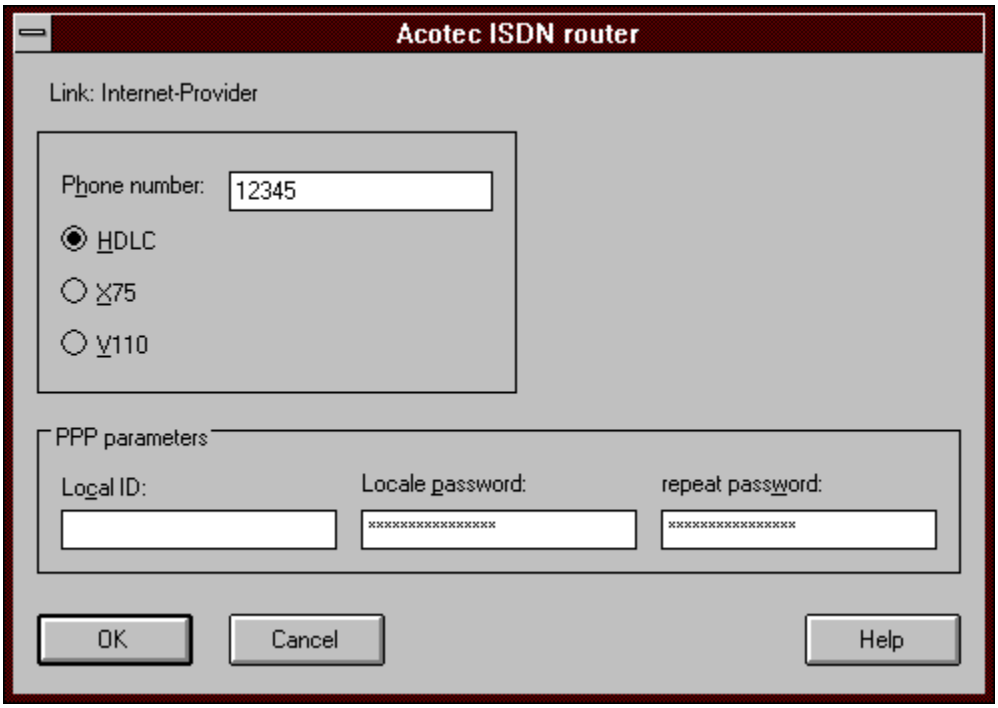
The selected adapter is marked with an arrow (-->) in the "Selection" column and is available for connecting networks via ISDN.

Disable

The selected adapter is disabled, i.e. the arrow in the "Selection" column is removed and the adapter is no longer available for connecting networks via ISDN.

Configuring a link to your Internet Services Provider

You can set up a link to your Internet Services Provider in this window. This configuration does not necessarily have to be carried out, but it provides the benefit that, on completing your router configuration, you will have a functioning link. If you do not wish to carry out this configuration, close the dialogue box with *Cancel*.



Telephone number

Enter here the phone number of your Internet Services Provider.

B-channel protocol

Select the B-channel protocol arranged with your Internet Services Provider.

PPP Parameters

The *Local ID* and the *Local Password* are assigned to you by your Internet Services Provider.
The *Local ID* indicates the username, the *Local Password* the Password.

Configuration of new ISDN adapters

New ISDN adapters are initially configured in accordance with the information provided by the manufacturer. They must then be made known to the ISDN MPR. To do this, use Windows NT System Control.

1. In the "System Control" group, double-click on the "Network Settings" icon.
   The "Network Settings" dialogue box opens.
2. From the list of installed network software, select the entry "ACOTEC Multiprotocol Router" and then click on "Configure".
   The "WAN Adapter Configuration" dialogue box opens.
3. From the list of available ISDN adapters, select the newly installed one and click on "Configure". The "Controller Configuration" dialogue box opens.
4. Enter in this dialogue box an alias, the number of the ISDN adapter and the number of B-channels to be used by the ISDN MPR.
   Caution! You must input the ISDN number, otherwise routing via this ISDN adapter will not be possible..
   After you confirm these entries, the "WAN Adapter Configuration" dialogue box opens again. Click on "OK".

You can then close the "LAN Adapter Configuration" dialogue box by clicking on "Exit": no settings are required.

This completes the configuration of new ISDN adapters.

Configuration of new LAN adapters

New LAN adapters are initially configured in accordance with the information provided by the manufacturer. They must then be made known to the ISDN MPR. To do this, use Windows NT System Control.

1. In the "System Control" group, double-click on the "Network Settings" icon.
   The "Network Settings" dialogue box opens.
2. From the list of installed network software, select the entry "ACOTEC Multiprotocol Router" and then click on "Configure".
   The "WAN Adapter Configuration" dialogue box opens.
3. Click on "Exit": this dialogue box plays no part in the initialization of LAN adapters for the ISDN MPR. The "LAN Adapter Configuration" dialogue box then opens.
4. From the list of available ISDN adapters, select the newly installed one and enable it.

This completes the configuration of new LAN adapters.

Uninstalling the ISDN MPR

You can uninstall the ISDN MPR using Windows NT System Control.

1. In the "System Control" group, double-click on the "Network Settings" icon.
   The "Network Settings" dialogue box opens.
2. From the list of installed network software in this dialogue box, select the entry "ACOTEC Multiprotocol Router" and then click on "Delete".

This completes uninstalling the ISDN MPR.

ConnectGate

To install ConnectGate you only have to enter the serial number and the activation key.

Serial Number

RAS

The setup help for RAS is not available at present.

The ACOTEC ISDN RASCAPI Configuration Centre

The ACOTEC ISDN RASCAPI configuration centre allows easy and user-friendly configuration of ACOTEC ISDN RAS for Windows NT.

It offers the following configuration options:

- Configuration of MSN/EAZ
- Default B channel protocol configuration
- Incoming call number checking configuration
- RASCAPI log file configuration
- RASCAPI trace level configuration

If desired, it is also possible to switch between languages.

Configuration of MSN/EAZ

In this dialogue box you can set the MSN/EAZ to which the ISDN RAS for Windows NT should answer for incoming calls and which B channel protocols should used for incoming calls.

MSN/EAZ

In this field enter the MSN/EAZ with which the ISDN RAS for Windows NT should set up connections for incoming calls. External distant ends can only set up connections with the local ISDN RAS via the MSN/EAZ specified here.

B channel protocol

From the list, select the B channel protocol with which the MSN/EAZ specified in the MSN/EAZ box should react to incoming calls.

You can also allocate different MSN/EAZ's to different B channel protocols. The ISDN RAS then reacts to incoming calls with a specific MSN/EAZ and with the set B channel protocol.

MSN/EAZ list

This box displays all the MSN/EAZ's allocated to the various B channel protocols.

In order to select one of the allocations in the list, indicate the MSN/EAZ and the corresponding B channel protocol, then click on „Add".

You can remove entries from the list by selecting the entry in question and then clicking on „Remove".

Default B channel protocol Configuration

This dialogue allows you to set the default protocol with which the ISDN RAS should react to incoming calls or the default protocol which should be used to clear outgoing calls.

Outgoing default B channel protocol

The protocol set here is the default protocol used to clear outgoing calls if no other settings have been made in the RAS directory for outgoing connections.

Incoming default B channel protocol

The ISDN RAS will react to all incoming calls with the B channel protocol set here if no MSN/EAZ has been set or if an MSN/EAZ has been set but no B channel protocol allocated.

If an MSN/EAZ has been set and a B channel protocol allocated, the entry in this box has no effect as the allocated B channel protocol takes priority. (See also: ***MSN/EAZ configuration***).

Incoming call number checking configuration

This dialogue box allows you to set a number of ISDN call numbers with which the ISDN RAS can initiate call set-up externally. It can also be used to exclude certain specific call numbers, i.e. if the ISDN RAS receives a call with a given call number, call set-up is rejected.

New number

Enter an ISDN call number in this box.

Click on the relevant button („Not allowed“ or „Allowed“) to select whether the ISDN RAS may or may not accept incoming calls with this call number.

Then click on „Add“ to add the call number to the call number list.

Comment

Field in which you can enter a comment on an entered call number.

Add from log file

Click on this button to add all the call numbers in the current log file to the call number list as allowed call numbers.

You can exclude individual call numbers from this list by selecting the entry in the call number list and then clicking on „Not allowed“.

Activate incoming call checking

Incoming calls are checked only if this option is active. If this is not the case, all incoming calls are accepted.

Always accept empty call numbers

By clicking on this check box you can ensure that incoming calls for which no call number is transmitted are always accepted.

The „Activate incoming call checking“ and „Always accept empty call numbers“ options are not mutually exclusive and can be used in parallel, i.e. incoming call numbers can be checked whilst incoming calls without transmitted call numbers are being accepted.

RASCAPI Log File Configuration

This dialogue box allows you to select the information to be contained in the log file (log level). All communication procedures routed via the ISDN RAS are logged in the log file.

Logging level

You can set the log level yourself. Simply click on the options below to activate them:

- **Incoming connections**
  incoming connections are logged,
- **Outgoing connections**
  outgoing connections are logged,
- **Call-charge information**
  call-charges for all logged calls are displayed in the log file if call-charge information is available from the network,
- **Time and date information**
  the date and time of each logged connection is displayed in the log file.

Set as default log level

Click on this button if you want the information selected to be applied as the default setting whenever log files are generated.

Log data

In this section you can select where and under what name the log file(s) is/are to be saved. You can also set:

- **Maximum size of log file**
  When the log file reaches the sized specified here it is closed and a new log file is opened.
- **Number of log backups**
  specifies how many backup files should be kept in addition to the current log file.

If you have decided that backup files should be made, when a log file reaches its maximum size it is saved as a backup file and a new log file is opened.

The backup files are stored in the same directory as the current log file with the last character in the file name being replaced by a number. The most recent backup is numbered *„1“* and the oldest by *n* (=number of log backups).

Update entries

If you have changed the name and/or path of the log files click on this button to apply the changes.

Display log file

By clicking on this button you can check changes made to the current log file from this dialogue box.

RASCAPI Trace Level Configuration

This dialogue box allows you to select the information to be contained in the trace file (trace level). All actions performed by the ISDN RAS are logged in the trace file according to the level set.

Trace level

The trace level is pre-set to list errors. This trace level is sufficient for normal operation. In the event of an error, an individual trace level can be set in conjunction with ACOTEC Support in order to identify and remove the source of the error.

You can, of course, set the trace level to suit your particular requirements, but you should note that a high trace level is not needed during normal operation. It should be set to a low level to avoid using additional resources.

Trace Files

In this section you can select where and under what name the trace file(s) is/are to be saved. You can also set:

- **Maximum size of trace file**
  When the trace file reaches the sized specified here it is closed and a new trace file is opened.
- **Number of trace backups**
  specifies how many backup files should be kept in addition to the current trace file.

If you have decided that backup files should be made, when a trace file reaches its maximum size it is saved as a backup file and a new trace file is opened.

The backup files are stored in the same directory as the current trace file with the last character in the file name being replaced by a number. The most recent backup is numbered ***„1“*** and the oldest by ***n*** (=number of trace backups).

Update entries

If you have changed the name and/or path of the trace files click on this button to apply the changes.

Display trace file

By clicking on this button you can check changes made to the current trace file from this dialogue box.

Activating the ISDN RAS for Windows NT

The ISDN RAS software can only be installed completely if the serial number and activation code are entered correctly during installation.

This information is provided on the enclosed information sheet which should be kept in a safe place. If the information sheet is unavailable, please contact ACOTEC Support.

The serial number contains the following information:

Limited validity full version (demo)

`rxammjjnn` **rxa** for the demo,

mmjj for the month and year in which the demo version expires,

nn as the number element of the serial number.

Full version

`Rasxxnnnn` **ras** for the full version,

xx for the number of channels,

nnnn number element of the serial number.

ACOTEC ISDN RASCAPI Driver Configuration

This dialogue box allows you to change the settings for the entries in the list. This entry contains the following information:

- **Active**
  An arrow in this column indicates that the ACOTEC ISDN RASCAPI driver will use this adapter. To activate or deactivate the driver, simply click on the appropriate button („Activate“ or „Deactivate“). If the driver is deactivated, the arrow is this column disappears.

- **CAPI device**
  Name of CAPI driver

- **Ctrl (Controller)**
  Indicates which controller the ISDN RAS is using.

- **Channels**
  Indicates how many of the available B channels are being used for the ISDN RAS.

  Abbreviation 2/2:
  two of two available channels are being used

- **Alias name**
  Indicates a name for the ACOTEC ISDN RAS driver. You can change this name (see explanation of the „Configuration“ command).

- **Telephone number**
  The telephone number indicated here is the MSN/ EAZ which the ISDN RAS records outgoing calls. In the vast majority of cases it is „0“. In some cases it may be necessary to modify it (see also ***Configuring the ISDN adapter for ACOTEC RASCAPI***)..

Configuration
Click on this button to change the alias name and telephone number if required.

A dialogue box will appear in which these parameters can be edited.

Serial number
Click on this button and a dialogue box will appear in which you can enter the serial number and the activation code. This information is then close to hand if you require support.

Language selection
You can change the language setting.

Configuring the ISDN adapter for ACOTEC RASCAPI

This dialogue box shows you the properties of the ISDN adapter and allows you to change the alias names and the telephone number for the ISDN adapter which should be available for the ISDN RAS.

Alias name

You can either enter a name of your choice or use the default name.

Telephone number

The ISDN RAS uses the telephone number specified here to log onto the bus. In most cases „0“ is the correct entry.

If „0“ is not the correct number for logging onto the bus, find out the correct number from the administrator and change the entry accordingly.

Selected for RAS

If this option is activated, the appropriately configured ISDN adapter is selected for the RAS, i.e. the RAS communicates via this ISDN adapter.

If this option is not activated, calls cannot be set up via the RAS.

Parameters for configuring the RAS monitor

Using the Microsoft RAS monitor, it is possible to display the call set-up activities for each port on the screen.

This dialogue box allows you to configure how many RAS monitors you wish to display on the screen and where they should be positioned. This means that RAS monitors started several times to monitor several ISDN ports can be displayed on the screen in a user-friendly manner.

To do this you can start the RAS monitor with various parameters. The parameters are added to the end of the command line used to call up the RAS monitor, separated by a space. Likewise, the parameter value is also separated from the parameter by a space. (See example given in the dialogue.)

-c

Number of RAS monitors displayed on the screen. In addition to the number of RAS monitors specified here, a RAS monitor for the first connection set-up is also displayed on the screen.

-l (lower case „L“)

Distance in pixels between the first RAS monitor and the left-hand edge of the screen.

-u

Distance in pixels between the first RAS monitor and the upper edge of the screen.

-x

x-value (width) of the RAS monitors (in pixels).

-y

y-value (height) of the RAS monitors (in pixels).

-s

Number of columns
Where there are a large number of B channels to monitor and depending on the selected size (x- and y-values) it is not possible to display all the monitors in one column. The monitors are displayed in a number of columns so that they can all be shown on the screen.

-f

If this parameter is included in the command line the RAS monitors always appear in the foreground of the screen.

-k

This parameter closes RAS monitors with old settings before opening new monitors (with new settings). It is a good idea to use this parameter while you are trying out the optimum arrangement of the RAS monitors on the screen, as it closes all the monitors from the previous setting at once.

-n

Suppresses the start of RAS monitors on the screen and can be used to close the RAS monitors in conjunction with „-k“.