

User Manual

for the

Configuration of the NetLink Adapter

via the

S7B Driver

for

iFIX/FIX32

Release date: 10.06.2005

Editor: J. Stähler, InCoSol-Industrial Communications Solutions

Table of contents

1.	Introduction	4
1.1	Purpose of this document	4
1.2	Target groups	4
1.3	Definitions and acronyms	4
1.3.1	Acronyms	4
1.4	Typographical conventions	4
2.	The NetLink Adapter	5
2.1	Hardware	5
2.2	Configuration – general information	5
2.3	MPI or Profibus	5
2.3.1	MPI bus parameters	6
2.3.2	Profibus parameters	7
2.3.3	Determination of Profibus parameters	7
3.	The S7B Driver	11
3.1	Configuration of the NetLink adapter with the help of the S7B driver's power tool	11
3.1.1	Setting an IP address when Netlink is in factory state	11
3.1.1.1	Start the S7B Power Tool	12
3.1.1.2	Determination of accessible NetLink adapters	13
3.1.1.3	Set a temporary IP address	14
3.2	Permanent storage of the IP address and bus parameters	16
3.2.1	TCP/IP parameters of the first property page MPI/PB NetLink(1)	17
3.2.1.1	Up/Download IP Addr	17
3.2.1.2	Permanent IP Addr	17
3.2.1.3	Subnet Mask	17
3.2.1.4	Default Gateway	18
3.2.2	TCP/IP parameters on the second property page MPI/PB NetLink(2)	18
3.2.2.1	MPI bus parameters	18
3.2.2.2	Profibus parameters	18
3.3	Read back the TCP/IP and bus parameters from NetLink	20

List of Tables

Table 2-1:	Standard MPI bus parameters	6
Table 2-2:	Profibus parameters	10

List of Pictures

Picture 2-1:	Dialog „HW Config - SIMATIC“ in Simatic Manager	7
Picture 2-2:	Dialog „Properties - DP“ in S7 hardware configuration	8
Picture 2-3:	Property Page „Parameters“ of dialog „Properties - PROFIBUS Interface DP“ in S7 hardware configuration	8
Picture 2-4:	Property page „General“ of dialog „Properties - PROFIBUS“ in S7 hardware configuration	9
Picture 2-5:	Property page „Network Settings“ of dialog „Properties - PROFIBUS“ in S7 hardware configuration	9
Picture 2-6:	Property page „Bus Parameters“ of dialog „PROFIBUS(1)“ in S7 hardware configuration	10
Picture 3-1:	Power Tool with selected Channel „NetLinkMPI“ and property page „Prim. MPI/PB NetLink(1)“ in foreground	12
Picture 3-2:	Dialog „Scan for NetLinks“ to set the temporary IP address	13
Picture 3-3:	List of the found NetLink adapters and allocation to configured adapters	13
Picture 3-4:	Dialog „Set NetLink's IP Address“ to enter the IP address	14
Picture 3-5:	Message box which indicates that the IP address was set successfully	14
Picture 3-6:	Error message box, if the temporary IP address could not be set	15
Picture 3-7:	Message box at the end of the dialog „Scan for NetLinks“	15
Picture 3-8:	Relation between the selected bus type and its corresponding parameter set	16
Picture 3-9:	Relation between the Step7 hardware config. bus parameters and the S7B configuration bus parameters.	19

1. Introduction

1.1 Purpose of this document

This document describes the procedures of the configuration of a NetLink adapter from the company Hilscher via the S7B driver for iFIX/FIX32. Due to the specific features and functionality of the NetLink adapter, the ability to configure the NetLink adapter on pure intuition is limited. This detailed documentation is designed to assist the user where necessary.

1.2 Target groups

This documentation addresses iFIX/FIX32 application engineers, who wish to integrate the S7B driver with the NetLink adapter in their system.

1.3 Definitions and acronyms

1.3.1 Acronyms

UDP	User Datagram Protocol
TCP/IP	Transmission Control Protocol /Internet Protocol
MPI	Multi Point Interface
CP	Communication Processor
HSA	Highest Station Address

1.4 Typographical conventions

Files, directories, host- and domain names, as well as menu entries and options will be *italicized*.

Blue font will be used for the titles of dialog windows.

Red font will be used for the lettering on button controls.

Green font will be used for the field names of the input- and display fields as well as for names of property pages.

2. The NetLink Adapter

2.1 Hardware

The NetLink adapter is a gateway between the ethernet port of the iFIX system and the MPI bus or Profibus of the S7 PLC. Via auto-detection the ethernet interface identifies if it is connected to a 10 or 100 MBit ethernet network.

The complete hardware of the NetLink adapter is fit in a standard Profibus D-Sub housing, thus the NetLink adapter can be plugged directly in to the MPI or Profibus port of the S7 or any other gadget that is compatible with an MPI bus.

The supply voltage is provided by the MPI-/Profibus connection. For this, the MPI-/Profibus connector of the S7 must provide a voltage of 24 volt on pin 7 of the 9-Pin D-Sub-plug.

If there is no supply of 24 volt on the Profibus plug of the CP, as it is the case with the Profibus CP 343-5, the NetLink adapter can be separately supplied with power. In this case the junction box for MPI and Profibus made by Helmholtz can be recommended (Helmholtz code No. 700-751-MPV20).

2.2 Configuration – general information

The configuration of the NetLink as MPI bus or Profibus connection is done by the S7B driver software. As factory defaults the NetLink adapter is always configured for an MPI bus connection. On the ethernet site it does not have any TCP/IP addresses, but only a unique MAC address. The initial download of the basic configuration parameters (setup of the TCP/IP address) is done via ethernet with the help of the User Datagram Protocol (UDP). The UDP does not need a TCP/IP address in order to address the communication partners, but only the MAC address. Because of the factory defaults the NetLink adapter does **not** have a TCP/IP address yet (or the address is 0.0.0.0) and therefore the S7B software cannot access the NetLink adapter via TCP/IP. Hence, the software uses the UDP once to assign a unique TCP/IP address for the NetLink adapter. The TCP/IP address transferred to the NetLink adapter via UDP is only temporarily valid as it is only stored in the internal RAM of the adapter. If the NetLink adapter is switched off after it has received a temporary TCP/IP address via UDP, this address will be lost once the adapter is switched on again. The reason for this, is that the RAM loses all its information when the power supply is switched off. The TCP/IP address is only stored permanently once the S7B driver has downloaded the so-called DBM-file (database file) into the adapter. This file contains in addition to the TCP/IP address all other MPI/Profibus parameters such as MPI/Profibus baud rate, highest station address or the station address of the NetLink adapter. The DBM-file is saved in the adapter's flash memory and is kept even after a power-off of the NetLink adapter. Once the NetLink adapter can be accessed via a TCP/IP address, a new TCP/IP address can be assigned via the TCP/IP protocol.

Attention: As the UDP cannot address a NetLink adapter across a router, the NetLink adapter must be in the same ethernet network (sub-network) as the PC that it used for the initial set-up of the TCP/IP address via the UDP.

2.3 MPI or Profibus

The NetLink adapter can be used as an MPI bus station, but also in a Profibus DP or FMS network. Within existing Profibus networks neither the configuration of the master nor configuration of the slaves has to be adapted. In a Profibus DP net it is not necessary to configure the NetLink adapter as an additional slave. Only an unused Profibus station address must be available. This address must be less or equal the highest Profibus station address (HSA) configured in this Profibus net.

While the Profibus parameters are fixed at the MPI bus (see table 1), they can vary at the Profibus net, depending on the type of protocol (DP or FMS) and the number of stations on the bus. The NetLink adapter must know these Profibus parameters in order to be correctly accepted by the bus when it will be connected. The S7B Power Tool configuration program is used to record all these Profibus parameters and to download the parameter set to the NetLink adapter.

2.3.1 MPI bus parameters

In MPI networks the bus parameters are fixed according to the following table. Even though it's possible to change the MPI bus parameters, they should **not** be changed in the S7B driver's configuration dialog.

Parameter	Value
Highest station address (HSA)	31
Baud Rate	187500
Slot Time	415
Station Delay Min.	60
Station Delay Max.	400
Setup Time	1
Quiet Time	1
Gap Actualization Factor	20
Retries	2
Target Rotation Time	10000

Table 2-1: Standard MPI bus parameters

2.3.2 Profibus parameters

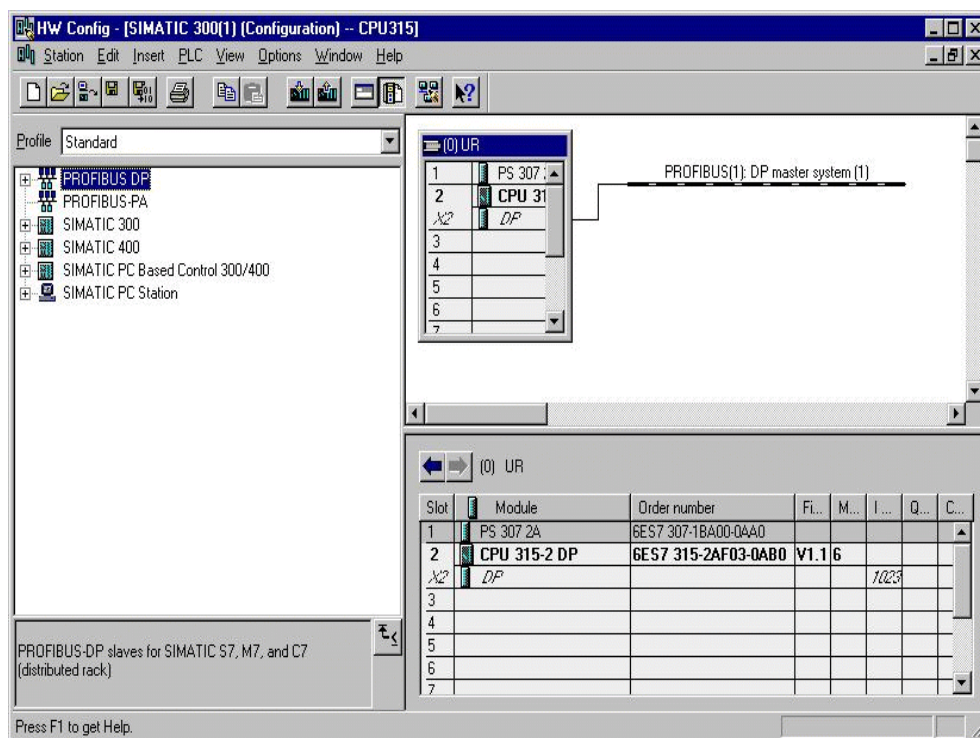
If the NetLink adapter is to be used in a Profibus network, the Netlink adapter must be configured with the current bus parameters of the Profibus which is described later in chapter 3.2.2.2.

At first the following chapter initially describes how the current profibus parameters can be obtained with the help of the Step7 software, so that they are available in the S7B Power Tool for the parameterization of the NetLink driver channel.

2.3.3 Determination of Profibus parameters

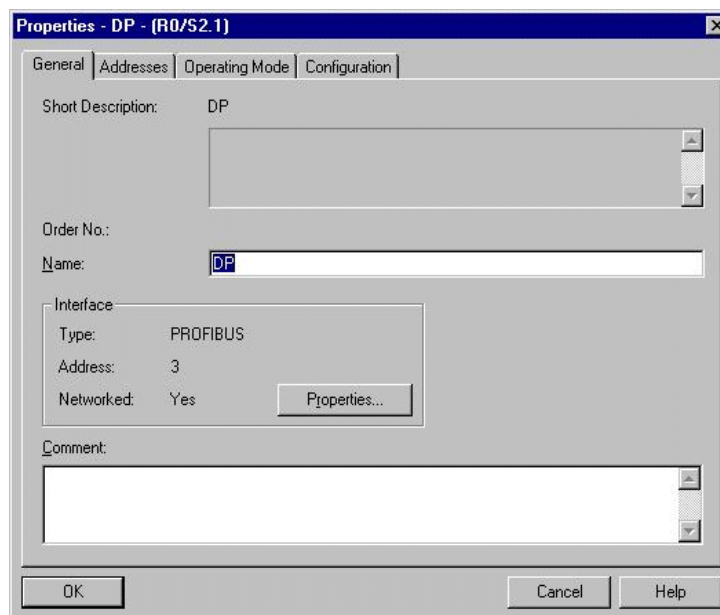
In Profibus networks the determination of the current profibus parameters is done via the Step7 software. How to obtain this information with the Step7-software is described thereafter step by step and with the help of several screen shots.

1. Open the hardware configuration in the Step7 project. The dialog „HW Config“ occurs.



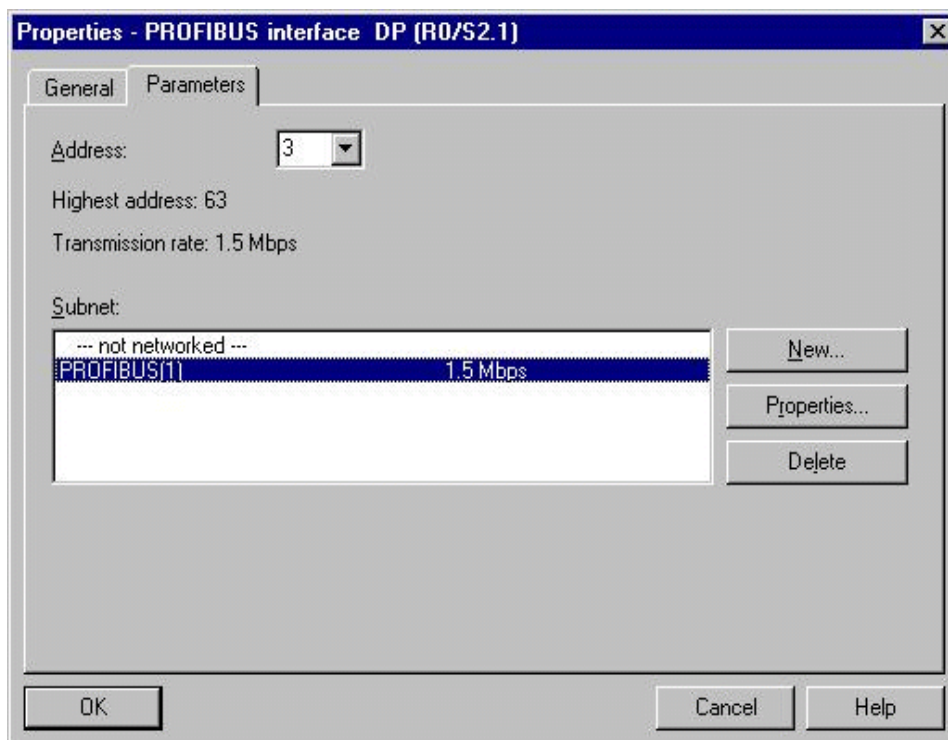
Picture 2-1: Dialog „HW Config - SIMATIC“ in Simatic Manager

2. Select the slot with the Profibus module (our example X2/DP). In the context menu (right mouse button) choose *Object Properties....* . The dialog "Properties - DP" comes up.



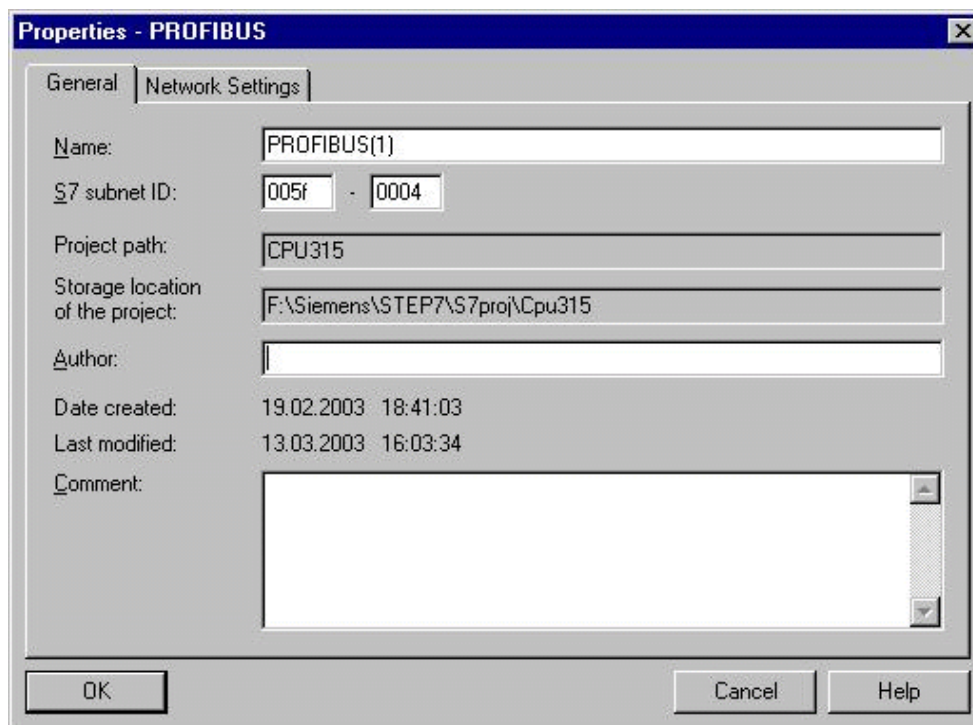
Picture 2-2: Dialog „Properties - DP“ in S7 hardware configuration

3. In the dialog „Properties -DP“ click the button „Properties...“. The dialog „Properties - PROFIBUS Interface DP“ with property page „Parameters“ comes up:



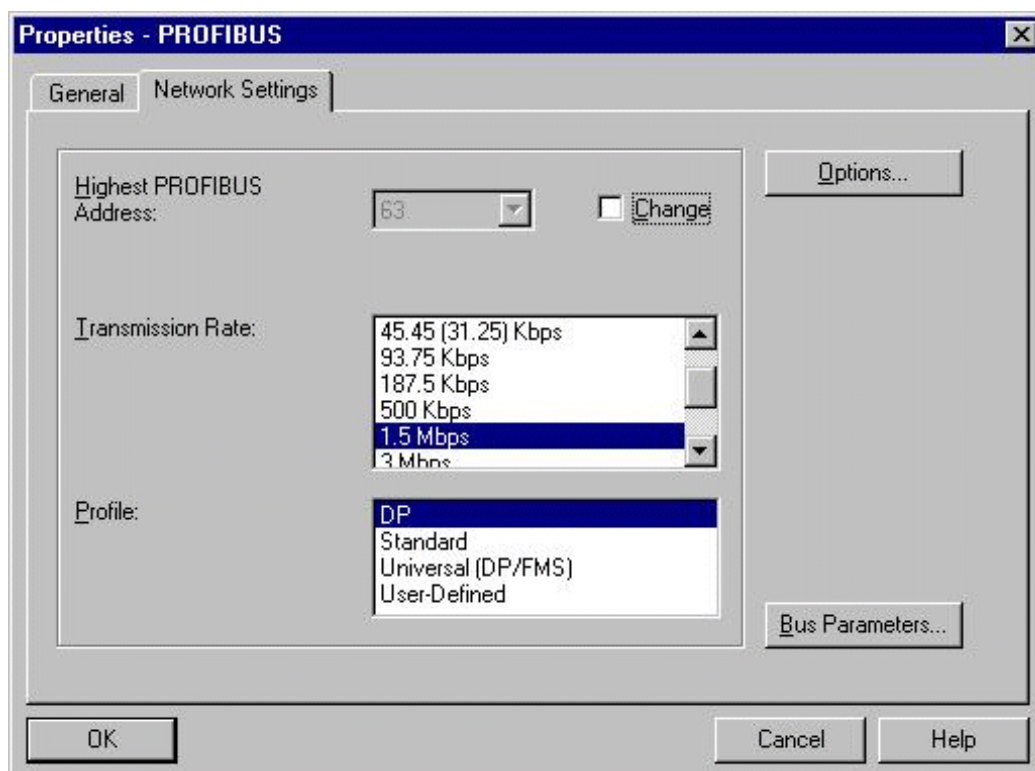
Picture 2-3: Property Page „Parameters“ of dialog „Properties - PROFIBUS Interface DP“ in S7 hardware configuration

- On property page „Parameters“ of the window „Properties - PROFIBUS interface DP“ click on the button „Properties...“. As shown below, the dialog „Properties - PROFIBUS“ with property page „General“ pops up:



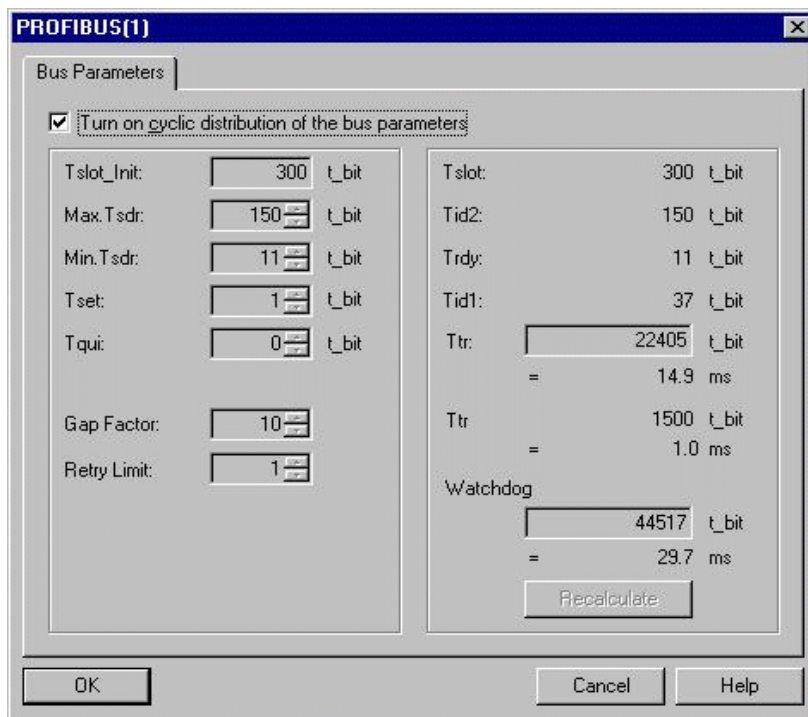
Picture 2-4: Property page „General“ of dialog „Properties - PROFIBUS“ in S7 hardware configuration

- In the window „Properties - PROFIBUS“ click on property page „Network Settings“. The dialog changes to the property page „Network Settings“ as shown below:



Picture 2-5: Property page „Network Settings“ of dialog „Properties - PROFIBUS“ in S7 hardware configuration

6. On the property page „**Network Settings**“ two Profibus parameters are already listed. These parameters are the **Highest PROFIBUS Address (HSA)** and the **Transmission Rate (Baud Rate)** of the Profibus net. Please write down these two parameters.
7. Click on button „**Bus Parameters...**“ in order to show all other profibus parameters.



Picture 2-6: Property page „**Bus Parameters**“ of dialog „**PROFIBUS(1)**“ in S7 hardware configuration

8. The parameters on the property page „**Bus Parameters**“ of the dialog „**PROFIBUS(1)**“, are listed in the following table. These parameters are needed later for the configuration of the bus parameters in the S7B configuration dialog. In the second column of the table below, there is a list of the respective field names for the corresponding values in the S7B configuration dialog:

Parameter STEP 7	Parameter S7B Configuration	Value
T slot_Init	Slot Time	
Max. Tsdr	Station Delay Max	
Min. Tsdr	Station Delay Min	
Tset	Setup Time	
Tqui	Quiet Time	
Gap-Factor	Gap Actualization Factor	
Retry	Retries	
Ttr	Target Rotation Time	

Table 2-2: Profibus parameters

Please make a printout of this page and note down the bus parameters.

3. The S7B Driver

3.1 Configuration of the NetLink adapter with the help of the S7B driver's power tool

With the installation of the driver S7B all software modules (driver) necessary for the the NetLink adapter are installed. It is not necessary to install the driver software that is delivered together with the adapter from Hilscher or other suppliers. The initial configuration of a "nameless" NetLink adapter is also done by the power tool of the driver S7B (as factory defaults the NetLink adapter does not have an IP address or the IP address is 0.0.0.0).

All steps necessary to configure the NetLink adapter are described in detail thereafter and are illustrated with the help of screen shots.

If the NetLink adapter does not have an IP address or in case you do not know the address, start with point 3.1.1 in order to configure a new IP address. If you want to change the IP address of an already configured NetLink adapter and if this adapter is accessible at this address, continue with point 3.2.

3.1.1 Setting an IP address when Netlink is in factory state

As factory defaults the NetLink adapter does not have a valid IP address (or the address is 0.0.0.0) and is therefore not accessible via the IP protocol. In order to initially assign a valid IP address to the NetLink adapter, the adapter is contacted via the UDP (User Datagram Protocol) and gets a valid IP address. The UDP does not address a network partner via the IP address, but via the MAC address. This MAC address is used on the lowest ethernet telegram level to address a partner. As factory defaults, each NetLink adapter has a valid and unique MAC address and can be contacted via this address. As the MAC address does not work across routers, the NetLink adapter is only accessible in the local network segment. Hence, connect the NetLink adapter to a port in your local network segment if you have to contact it via UDP.

In order to reduce the risk that a NetLink adapter already with an IP address getting another IP address via UDP by mistake, the NetLink adapter is equipped with a lock. Because of this lock the setting of a new IP address via UDP is only possible within the first three minutes after the power-up of the adapter. Hence, if a new IP address is to be set via UDP, it is necessary to disconnect the NetLink adapter from the power supply, then power it up again and set the new IP address via UDP within three minutes. However, this three minute limit is not valid if the NetLink adapter does not have an IP address yet (or the address is 0.0.0.0 - factory defaults).

An IP address set via UDP is not permanently stored in the NetLink adapter's flash memory, but only in its unbuffered RAM and therefore lost after switching off the adapter. To store the IP address permanently in the NetLink adapter's flash memory, a configuration download must be done. With this download the configuration file that contains the permanent IP address, other TCP/IP parameters and the MPI/Profibus parameters is saved permanently in the NetLink adapter's flash memory.

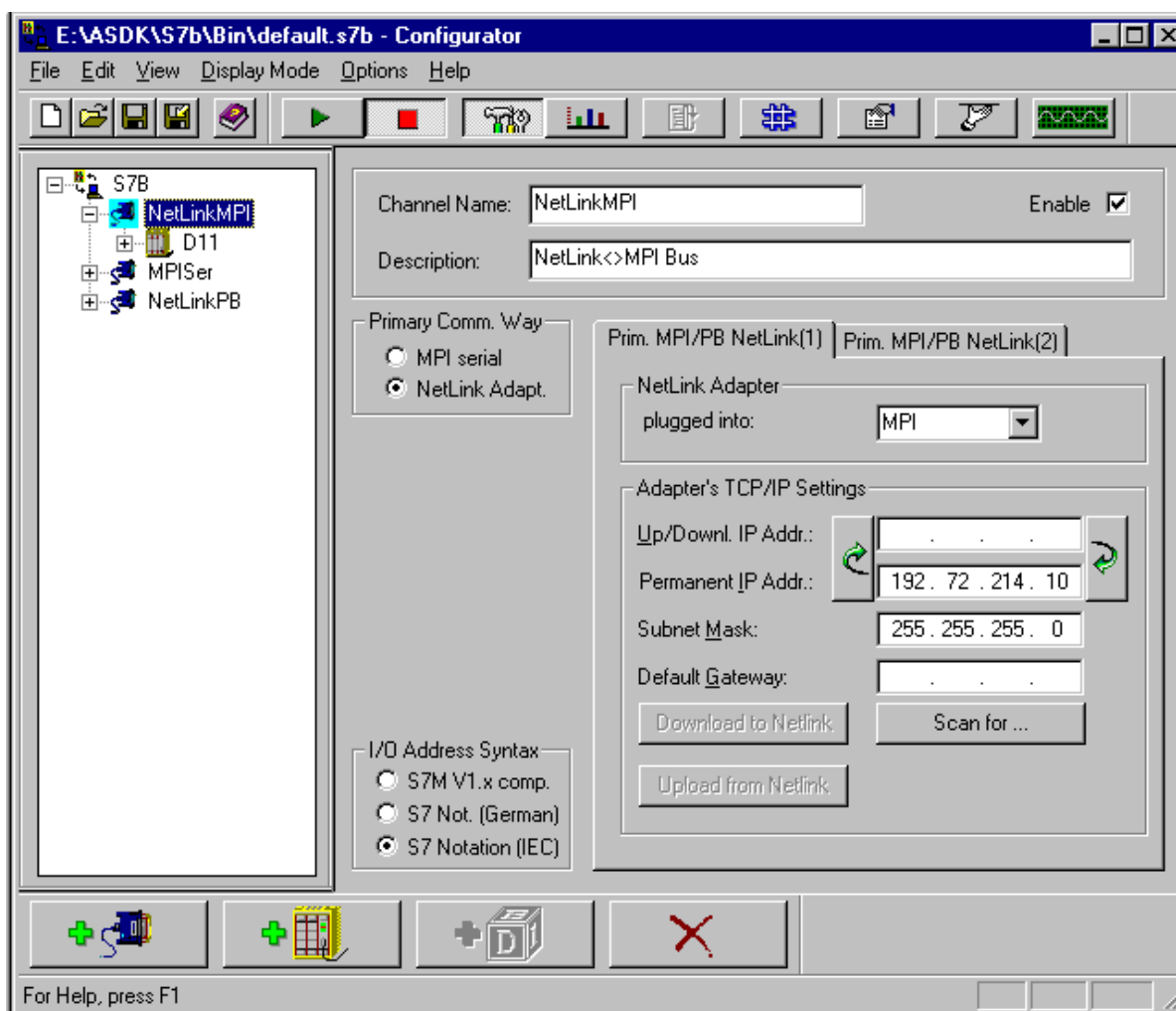
To configure an "empty" NetLink adapter, follow each step as described thereafter.

3.1.1.1 Start the S7B Power Tool

Open the power tool S7B starting from the program group iFIX or from the iFIX system configuration and open the configuration file called DEFAULT.S7B, if it is not done automatically. When installing the S7B driver this default configuration file is copied into the iFIX root directory.

The default configuration file contains the three channels "NetLinkMPI", "MPISer" and "NetLinkPB". To use the NetLink adapter on an MPI bus of a S7-SPS, select the channel *NetLinkMPI*,. to use the NetLink adapter on a Profibus, select the channel *NetLinkPB*. These channels are already configured with the necessary parameters for the respective bus.

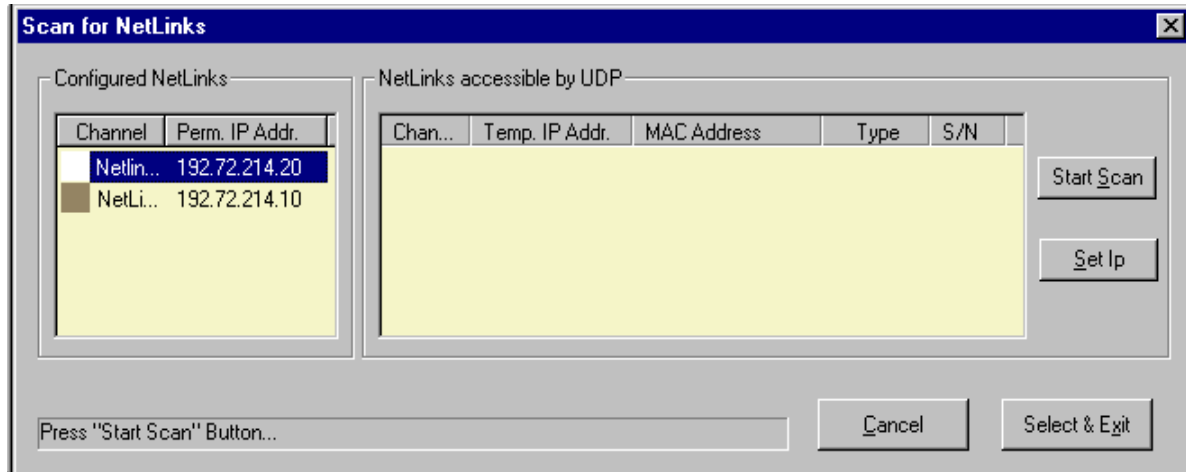
In the right half of the Power Tool window the property pages „Prim. MPI/PB NetLink(1)“ and „Prim. MPI/PB NetLink(2)“, pop up and the first property page is visible in the foreground.



Picture 3-1: Power Tool with selected Channel „NetLinkMPI“ and property page „Prim. MPI/PB NetLink(1)“ in foreground

3.1.1.2 Determination of accessible NetLink adapters

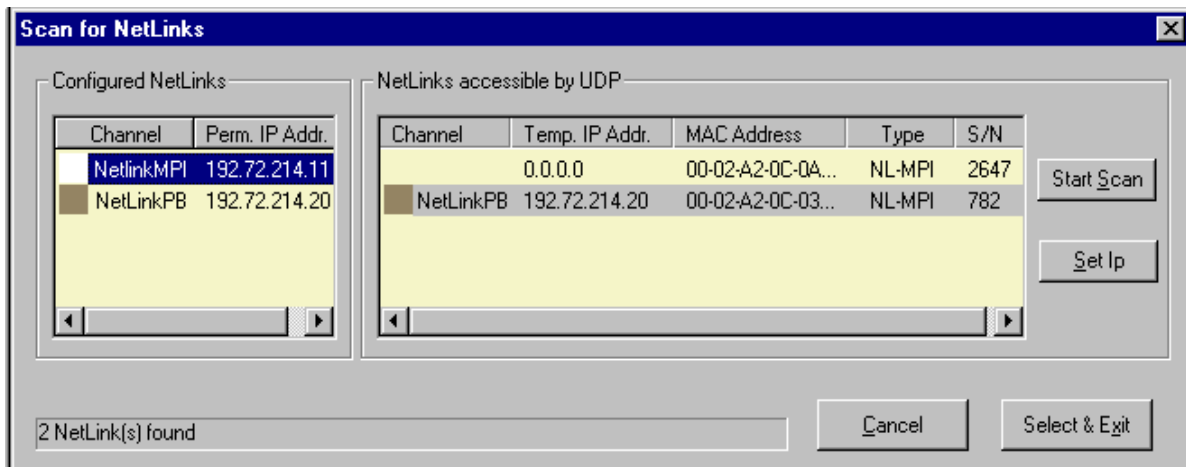
In order to set a temporary IP address for the NetLink adapter, click on the button „Scan for..“. A new dialog named "Scan for NetLinks" pops up.



Picture 3-2: Dialog „Scan for NetLinks“ to set the temporary IP address

In the list to the left „Configured NetLinks“ you can see the existing NetLink channels of the current configuration and their permanent IP addresses. The permanent IP address is the IP address stored in the configuration, which does not mean that it is actually configured in a NetLink adapter.

At first, the right list is empty, but will be completed once the button „Start Scan“ has been clicked and the software has found one or several NetLink adapter's in its own network segment. The click on the button „Start Scan“ sends a so-called broadcast call on the ethernet with the message "all NetLinks please answer". All NetLink adapters that have received this broadcast message send an answer to the driver S7B giving their MAC address, the IP address (if existing), a type identifier and the serial number. With the help of the received information, the driver completes the right list to show which NetLink adapters are currently accessible.

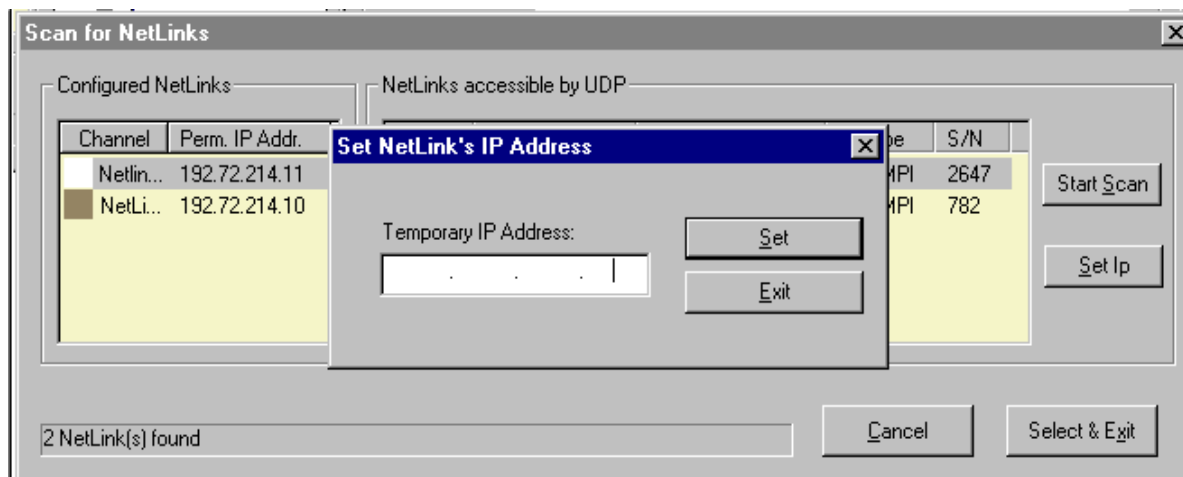


Picture 3-3: List of the found NetLink adapters and allocation to configured adapters

The above image shows that for the configured channel "NetLink PB" with the IP address 192.72.214.20 (brown square) a NetLink adapter with this IP address is accessible. For the configured channel "NetLinkMPI" with the IP address 192.72.214.11 (white square) no NetLink adapter was found. However, a second NetLink adapter was found that does not have an IP address yet or the IP address 0.0.0.0.

3.1.1.3 Set a temporary IP address

In order to assign a valid IP address to the NetLink adapter (without an IP address), select the NetLink adapter on the right list (**NetLinks accessible by UDP**) and then click on the button "**Set IP**". The following dialog window „**Set NetLink's IP Address**“ with an input field for the new IP address as well as **Set** button and **Exit** button comes up:

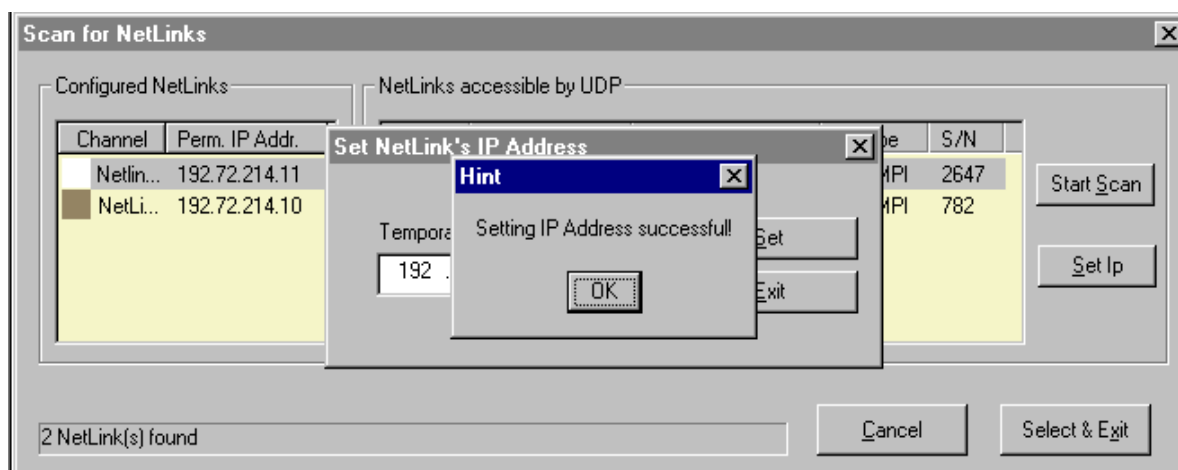


Picture 3-4: Dialog „**Set NetLink's IP Address**“ to enter the IP address

As the NetLink adapter's current IP address is still undefined (or is 0.0.0.0), the entry field "**Temporary IP Address**" is empty.

Enter an IP address and click on the **Set** button. The software transfers the entered IP address to the NetLink adapter and awaits its response. If the NetLink adapter cannot accept the IP address, it returns an error code to the software and a window with an error message pops up. In this case, the adapter should be disconnected shortly from power and another attempt to set the IP address should be made..

Once the NetLink adapter has accepted the new IP address, the following hint comes up that must be confirmed by clicking the **OK** button.



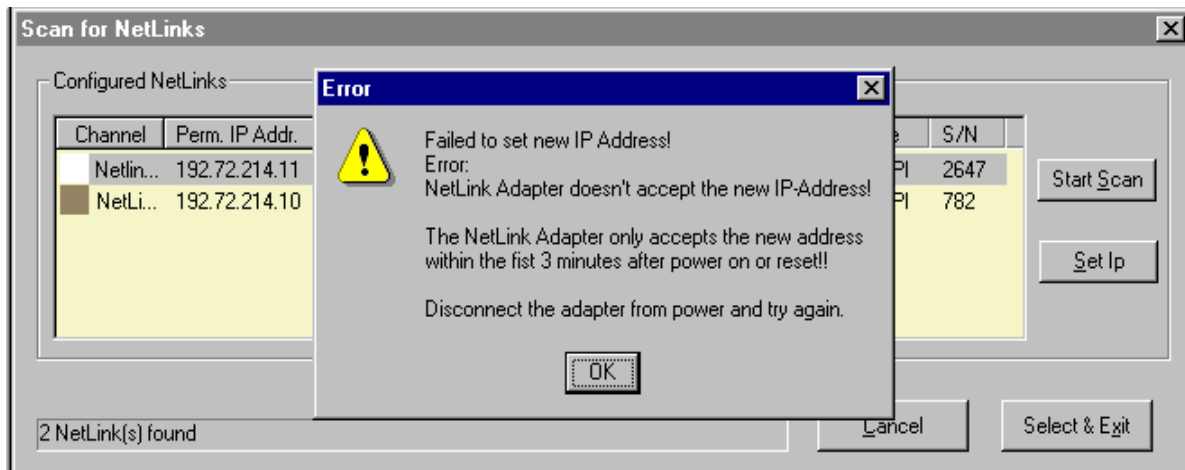
Picture 3-5: Message box which indicates that the IP address was set successfully

Now the NetLink adapter has a temporary IP address which will be lost if the adapter is disconnected from power.

Once the NetLink adapter has a valid IP address, this address can only be changed within the first three minutes after the power on (following the above procedure). So, if it is desired to change the set IP address again, the new address must be entered in the entry field "Temporary IP address". Before the Set button is clicked, the adapter should be disconnected shortly from power and re-started. After the re-start, the NetLink adapter accepts the request to change the IP address only for three minutes.

An attempt to change the IP address later than three minutes after the re-start, will result in the

NetLink adapter sending an error response and the following message will come up:

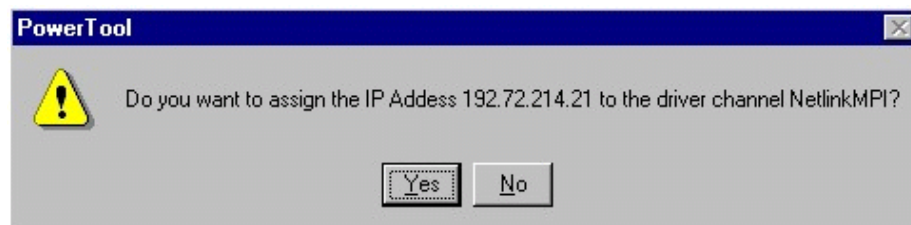


Picture 3-6: Error message box, if the temporary IP address could not be set.

If the temporary IP address was set successfully, click the "Exit" button to leave the dialog „Set NetLink's IP address“. In the list to the right, "NetLinks accessible by UDP", the previously selected NetLink adapter in the column "Temp. IP Addr." now contains the previously assigned IP address. Should this also correspond with an IP address of a configured NetLink adapter (left side), the corresponding colored square, in the first column in the right list, will be displayed.

To transfer the NetLink adapter or the IP address of the NetLink adapter in the channel configuration of the chosen driver channel, highlight the selected NetLink adapter by clicking the corresponding line in the right list ("NetLinks accessible by UDP"). Then click the button "Select & Exit".

The following message box will then ask if the IP address should be applied to the driver channel.



Picture 3-7: Message box at the end of the dialog „Scan for NetLinks“

If answered with "Yes", the given IP address will be assigned to the driver channel dialog as a temporary IP address and put in the field „Up/Download IP-Address". This means that the NetLink adapter is now accessible through the IP address and that the parameters can be downloaded. Only when the parameters have been downloaded, will the IP address be permanently stored.

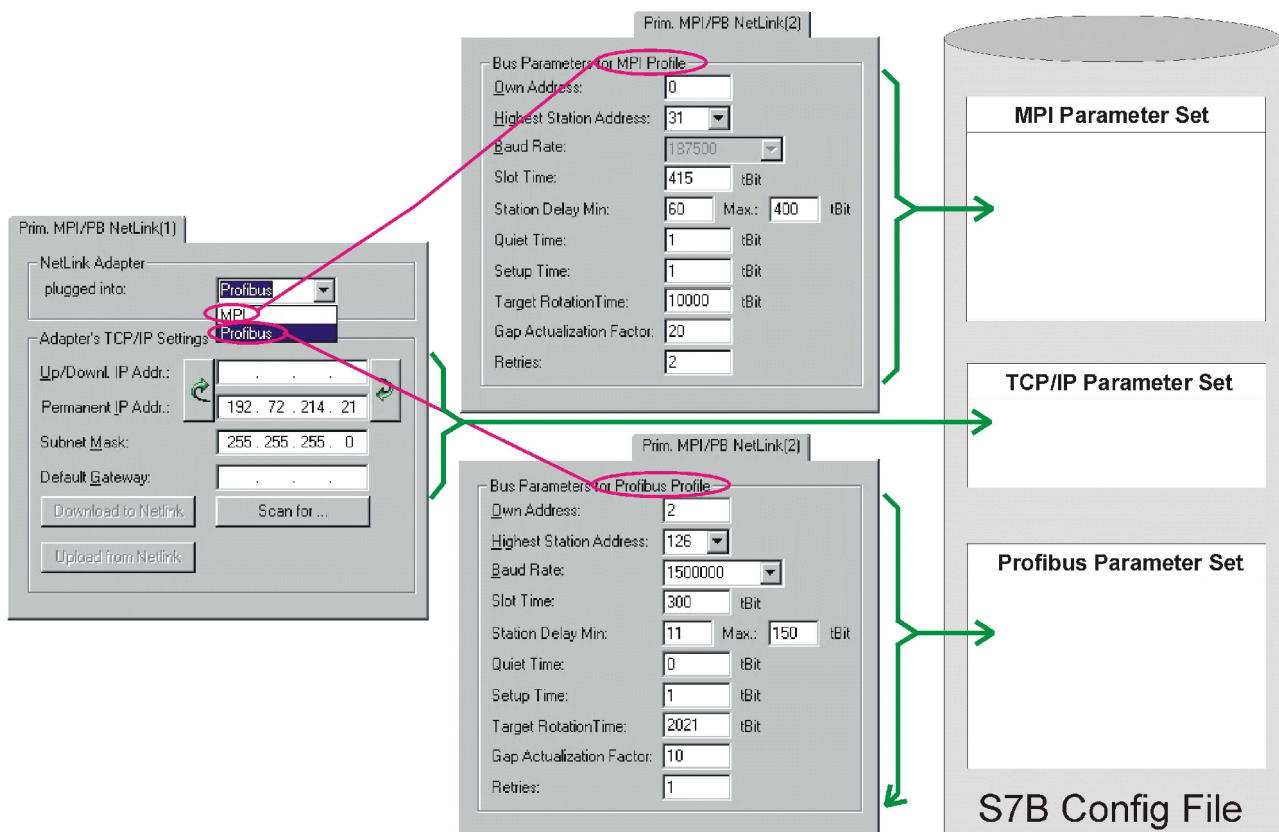
The following passage describes how the IP address can be permanently stored and how other network parameters and bus parameters of the NetLink adapter can be changed or read back.

3.2 Permanent storage of the IP address and bus parameters

Should the permanent IP address of the NetLink adapter (via which it is accessible) for whatever reason need to be changed or if the NetLink adapter was assigned only a temporary IP address and this should be stored permanently, it is necessary to perform a so called "Download" of the NetLink parameters. The NetLink parameter set contains, next to the IP address, the subnet mask, the default gateway address on the first property page [Prim. MPI/PB NetLink (1)] and all adjustable Profibus parameters or MPI bus parameters on the second property page [Prim. MPI/PB NetLink (2)]. It should be noted, that all changes to the parameters made via the Power Tool will only become active in the NetLink adapter after the parameters have been transferred to it, per download.

For the two different bus types (MPI and Profibus), the driver stores an individual parameter set. The parameter set can be selected by the "plugged into" Combo box on the first property page [Prim. MPI/PB NetLink (1)]. Due to the storage of the separate parameter sets, it is possible to switch from one bus type to the other, without the risk of losing the parameters of the bus type selected beforehand.

The following picture will elucidate the relation between the selected bus type and its corresponding parameter set.



Picture 3-8: Relation between the selected bus type and its corresponding parameter set

During the download of the parameters in the NetLink adapter, the TCP/IP parameter set and the corresponding bus parameter set of the selected bus type will be transferred. As the NetLink adapter stores only one bus parameter set, if the bus type is changed during the download of the new parameter set, the last will be overwritten. Therefore it is necessary to download the parameter set each time the bus type is changed.


3.2.1 TCP/IP parameters of the first property page MPI/PB NetLink(1)

The TCP/IP parameter set contains the following parameters:

3.2.1.1 Up/Download IP Addr:

During uploading or downloading the S7B Power Tool tries to connect to the NetLink adapter via the Up/Download IP address. Therefore, this must be the current valid TCP/IP address of the NetLink adapter. After starting the Power Tool and reading the S7B configuration file, this field is empty for the time being. As long as this field is empty, the buttons "Download to NetLink" and "Upload to NetLink" are disabled. Only when this field contains a valid IP address will the buttons be enabled to upload or download the parameter sets. To be able to download the parameter sets, it is necessary to ensure that the IP address corresponds with the IP address of the NetLink adapter, under which it can be reached (see point 1 below).


The Up/Download IP address field can be filled in three ways:

1. Manual entry of the TCP/IP address
If the IP address of the NetLink -adapter is known and the IP address is accessible, a manual entry of the IP address in the field "Up/Download.IPAddr." can be applied. To find out whether the IP address is actually accessible, test it with the command "PING" from the DOS-command window.
2. Automatic transfer from the dialog "Scan for NetLinks"
The new temporary IP address will automatically be inserted in the Up/Download IP address field if the NetLink adapter has received a new temporary IP address per UDP, via the dialog "Scan for NetLinks" and the dialog is then closed with the button "Select & Exit".
3. Transfer from the field „Permanent IP Addr.“
To change the NetLink's bus parameters only (i.e. the MPI's own station address), transfer the stored IP address from the "Permanent IP Addr." field, in the "Up/Downl. IP Addr." field by clicking the left transfer button .

3.2.1.2 Permanent IP Addr.

The permanent IP address assigned to this field will be transferred to the NetLink adapter and permanently stored, during the downloading of the parameters (click the button "Download to NetLink"). It is not obligatory that the permanent IP address must correspond with the temporary address. To change the present IP address, to which the NetLink adapter can currently be connected, type in the new IP address in the "Permanent IP Addr." field. Then type in the current IP address in the "Up/Downl. IP Addr." field. The parameter data are written in the NetLink adapter, through a click on the "Download to NetLink" button. After a successful download the NetLink adapter will be automatically reset and be accessible through the new IP address.

Attention! The given IP address in this field, is the address through which the S7B-driver establishes a data connection with the NetLink adapter in online mode (run).

The IP address in the "Up/Downl. IP Addr." field can be transferred to the "Permanent IP Addr." field by clicking the right transfer button .

3.2.1.3 Subnet Mask

The subnet mask determines, in a TCP/IP segment, the address range of the IP addresses, via which each host will be addressed. In a class C network, only the last 8 Bits (4th octet) of the IP address are available to address the host. From these 8 Bits however, one or more can be used to address a sub-network.

The NetLink adapter must be made recognizable to the subnet mask of the net segment to which it is physically attached. If the NetLink adapter is used in the same net segment as the system running the S7B driver, the settings of the NetLink subnet mask can be transferred from this

system.

3.2.1.4 Default Gateway

If the NetLink adapter is not used in the same net segment as the system on which the S7B driver runs, meaning, for example, it can only be reached via one or more routers, then the IP address of the primary router must be made recognizable to the NetLink adapter to which it is directly attached.

3.2.2 TCP/IP parameters on the second property page **MPI/PB NetLink(2)**

On the second property page of the NetLink channel configuration, the bus parameters for the MPI bus or the Profibus will be configured.

3.2.2.1 MPI bus parameters

If the NetLink adapter is used in an MPI bus, in most cases the default parameters can be used. The most important MPI bus parameters are the NetLink adapter's own station address and the highest station address.

The NetLink adapter must be assigned with its own station address in an MPI net. This may not be used by another MPI station and must be less than or equal to the highest station address. In standard MPI networks, the highest station address is set at 31. If the MPI network uses addresses higher than 31, then the highest station address setting of the NetLink adapter must be set accordingly.

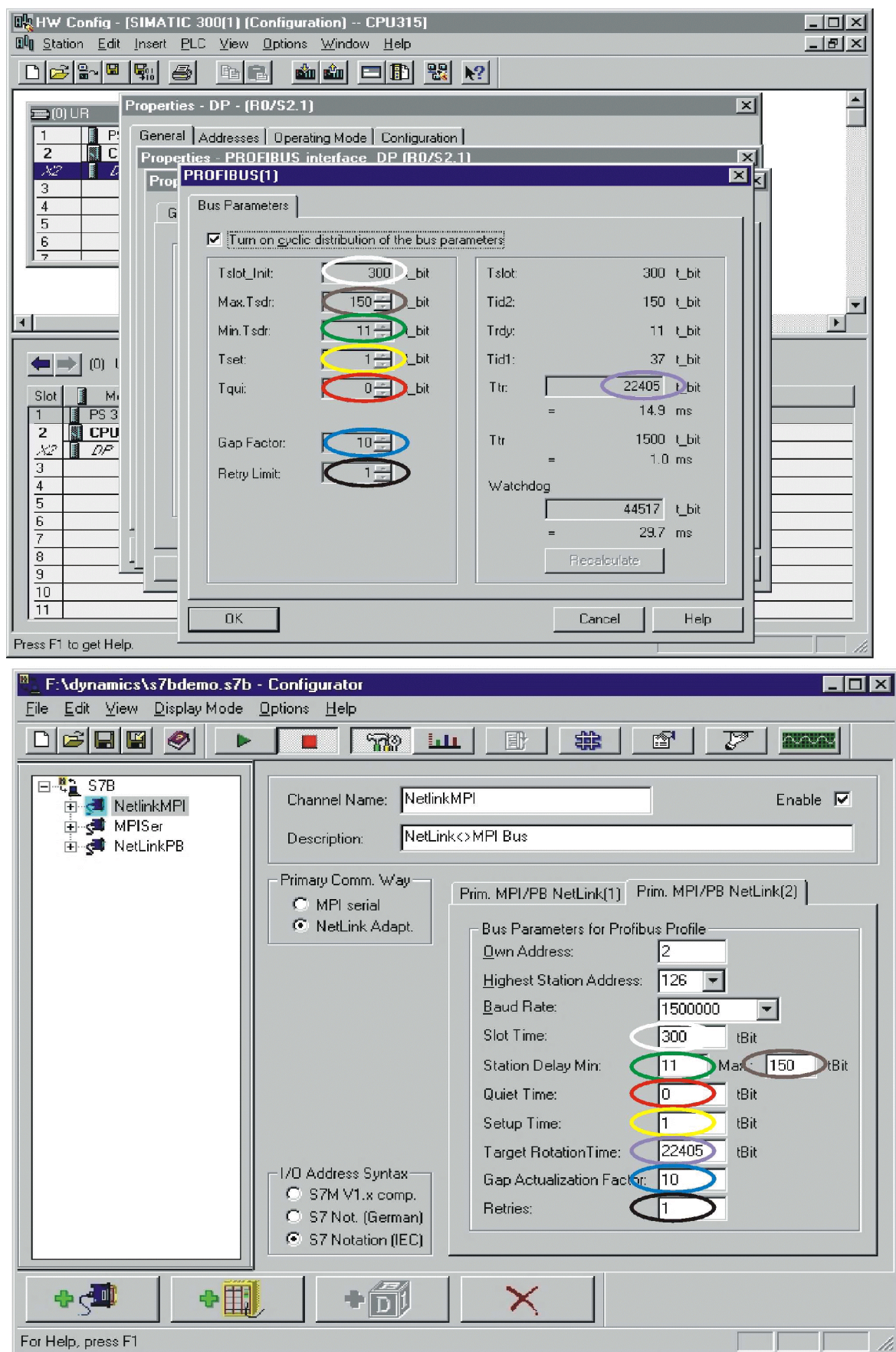
All other parameters should not be altered, as variations from the default values may hinder the bus communication or could be at the least disturbed by the NetLink adapter.

2.2.2.2 Profibus parameters

If the NetLink adapter is used on a Profibus, it must be configured with the current bus parameters. There is a detailed description of how to locate the bus parameters of the S7 Profibus in chapter 2.3.2.. Chart 1 on page 6 shows the relation between the parameters of the S7 side and the fields in the S7B configuration dialog on the second property page „**MPI/PB NetLink(2)**“.

The following picture demonstrates how the parameters from the Step7 configuration relate to the fields in the S7B configuration. The corresponding parameters of the Step7 configuration and the S7B configuration are marked by circles of the same color.

The bus parameters must be disclosed to the NetLink adapter per download. It is not sufficient just to collect the bus parameters. After the parameters have been gathered in the property page "**MPI/PB NetLink (2)**", it is then necessary to switch to the first property page "**MPI/PB NetLink (1)**" and by clicking the "**Download to NetLink**" button, the downloading of the bus parameters on to the NetLink adapter can be started.



Picture 3-9: Relation between the Step7 hardware config. bus parameters and the S7B configuration bus parameters.

3.3 Read back the TCP/IP and bus parameters from NetLink

The currently stored TCP/IP- and MPI or Profibus parameters in the NetLink adapter can be read out by clicking the "Upload from NetLink" button. They will be displayed on both of the property pages ("MPI/PB NetLink (1)" and "MPI/PB NetLink (2)"). Whether the bus parameter should be filled in the MPI parameters record or in the Profibus parameters record, must be selected before the upload through the selection of the Combo box "plugged into".

Attention! The upload function cannot recognise independently if the NetLink adapter is connected to the MPI or the Profibus.