

applications & TOOLS

MICROMASTER 4
Application Description

SIEMENS

Uploading and downloading drive parameters of a
MICROMASTER 4xx using STARTER

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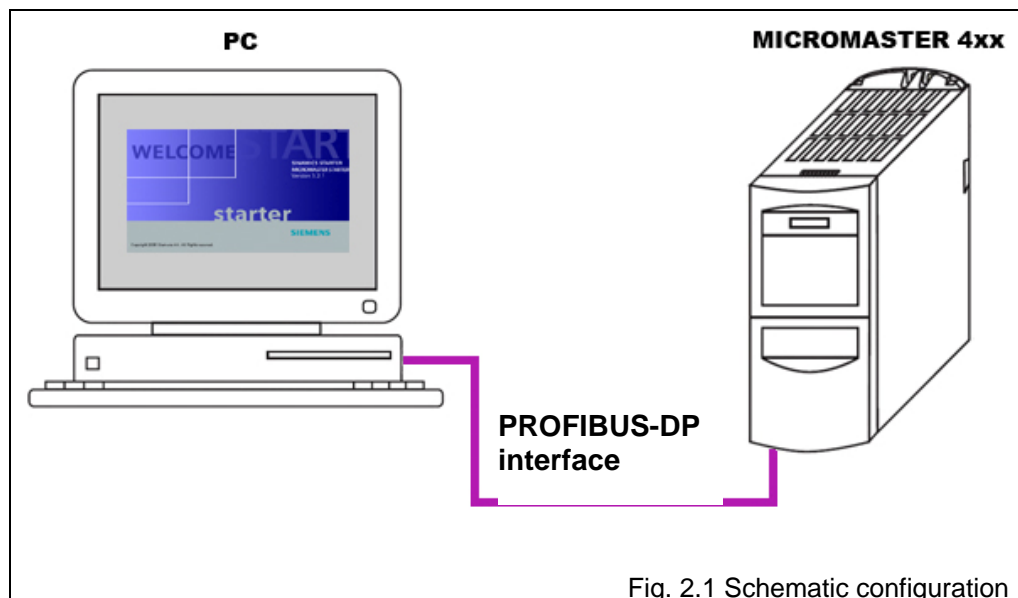
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<mailto:csweb@ad.siemens.de>

2 Description

It is often necessary to restore the drive parameters or quickly load specific drive settings.

This example shows you how you can load parameters of a MICROMASTER 4xx drive into a PC using the STARTER commissioning tool. There, the parameters are saved in a STARTER project and can be reloaded back into the drive (MICROMASTER 4).



*Uploading and downloading drive parameters of a MICROMASTER
4xx using STARTER*

*STARTER &
MICROMASTER 4*

3 Prerequisites

Please refer to the following readme file for the requirements placed on the operating system, the hardware and software

C:\Program Files\Notes\Deutsch\STARTER – Liesmich.wri.

In this particular example it is assumed that the required hardware components are correctly connected-up as shown in Fig. 1.1 and the necessary software is installed.

4 Upload

4.1 Starting STARTER

Fig. 4.1.1:

1. Click on 'Start' in the Windows bar.
2. In the start menu select 'Programs => STARTER => STARTER'.

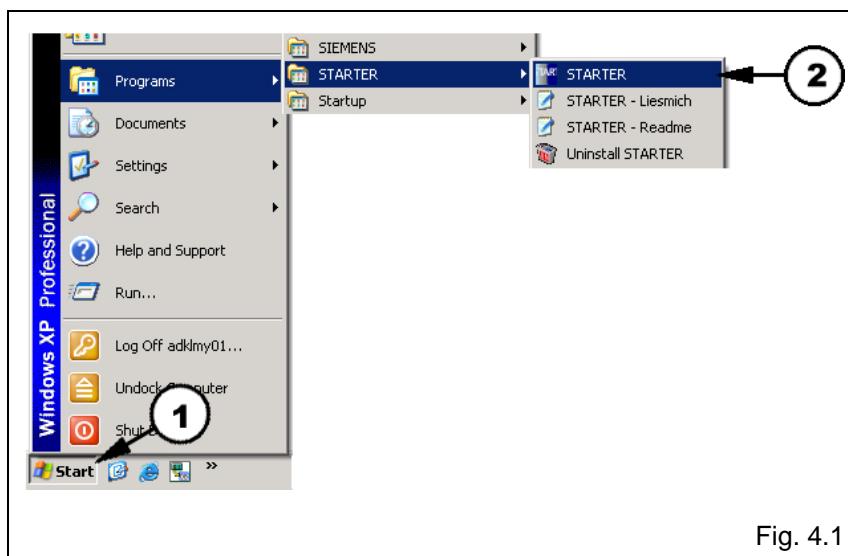


Fig. 4.1

Result: The “empty” main STARTER window opens (Fig. 4.1.1).

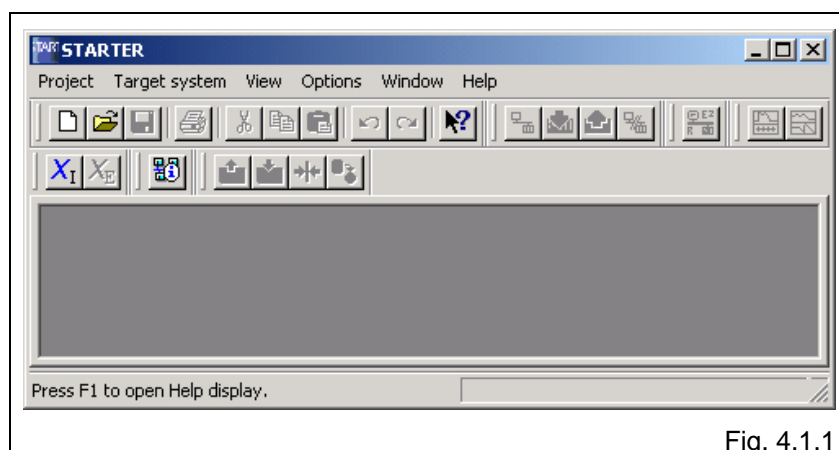


Fig. 4.1.1

4.2 Generating a new project

Fig. 4.2.1:

1. In STARTER, select '**Project => New...**'.
2. Under type, select '**Project**'.
3. Enter '**Upload_Download**' as the project name (any name can be used).
4. If required, change where the project is saved if you require another setting besides the default setting (e.g. '**D:\...**' instead of '**C:\...**').
5. Acknowledge with '**OK**'.

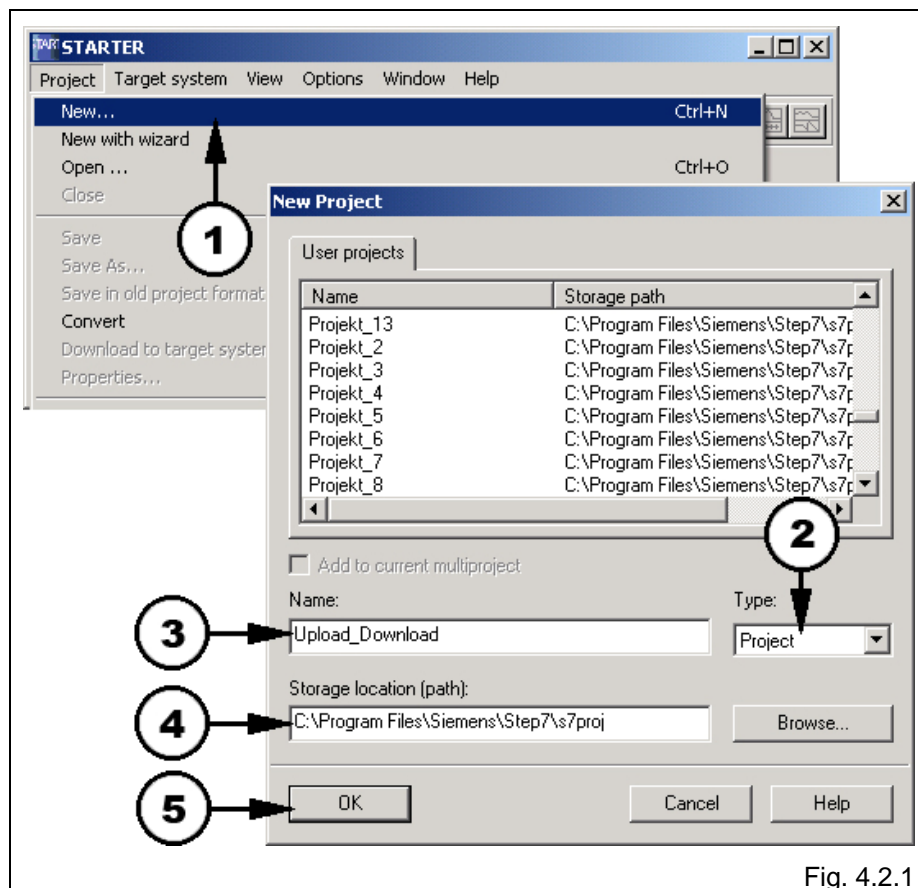


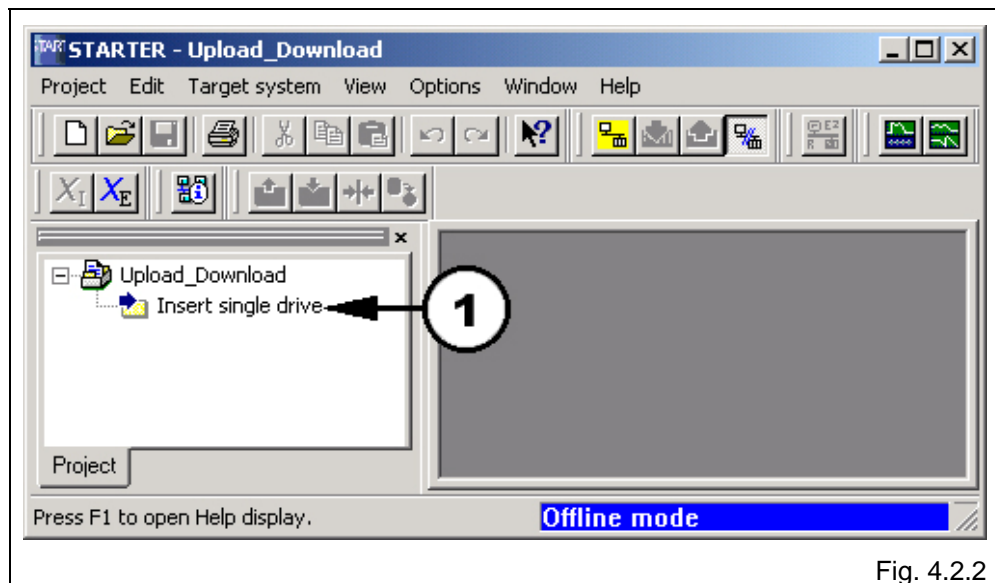
Fig. 4.2.1

Result: The new '**Upload_Download**' project is set-up in STARTER (Fig. 4.2.2).

4.2.1 Inserting a drive

Fig. 4.2.2:

1. Select 'Insert single drive' and then double click on this.



4.2.2 Selecting and configuring a drive

Fig. 4.2.3:

1. Select the drive (MICROMASTER 420).
2. Select the device version of the drive (firmware Version r0018).
3. Select the bus address (DP-slave address) of the drive (in this particular case, 3).
4. Close this window with 'OK'.

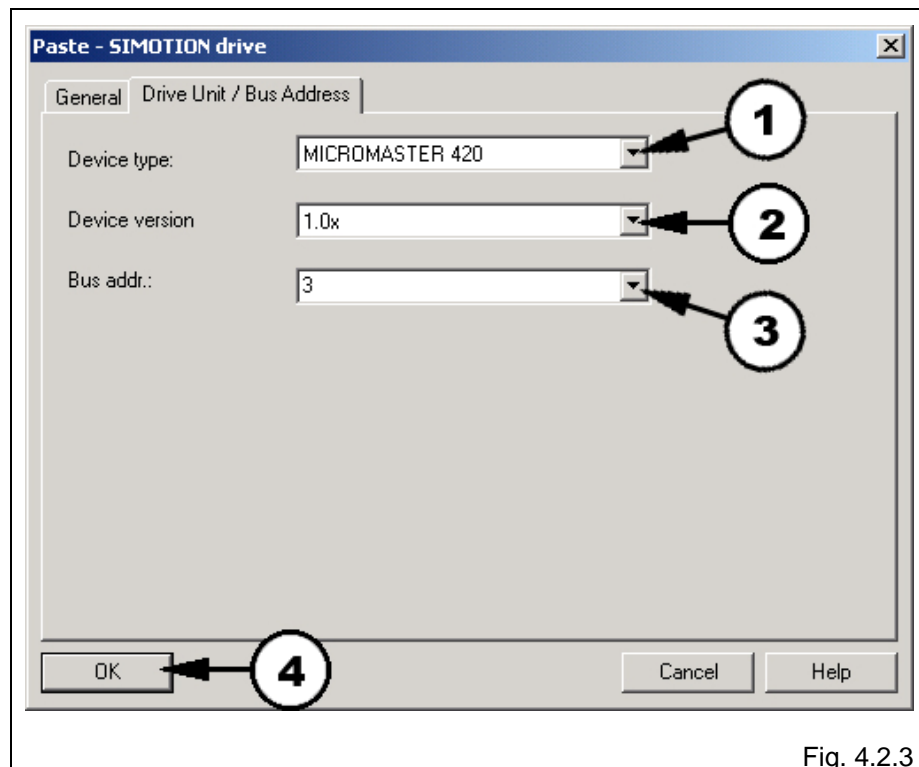


Fig. 4.2.3

Result: MICROMASTER 420 is inserted in the project.

4.3 Setting the communications link

4.3.1 Selecting the PG/PC interface

Fig. 4.3.1:

1. In the 'Options' menu of STARTER, select the sub-point 'Set PG/PC interface...'

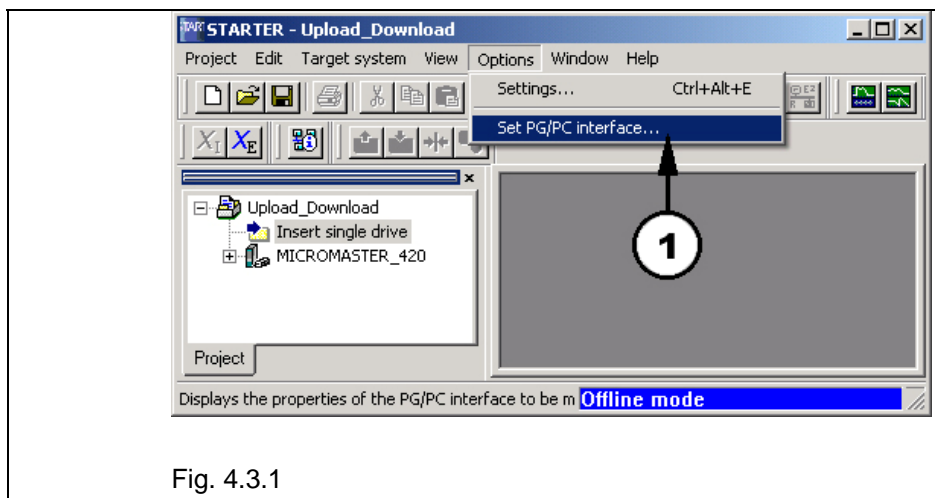


Fig. 4.3.1

Result: A new window opens - 'Set PG/PC interface' (Fig. 4.3.1, lefthand part of the screen).

4.3.2 Setting the PG/PC interface

Fig. 4.3.2:

1. Select the interface (in our particular case '**CP5512(PROFIBUS)**').
2. Select the access point '**S7ONLINE (STEP 7) → CP5512(PROFIBUS)**'.
3. Using the '**Properties...**' button, open an additional window
4. There, enter the checkmark against '**PG/PC is the only master on the bus**' and
5. Set the '**Address**' to **1**;
6. The '**Timeout**' = **1 s**;
7. The '**Transmission Rate**' = **1.5 Mbit/s**;
8. The '**Highest Station Address**' = **126**, and
9. The '**DP**' profile.
10. Close the '**Properties**' window with '**OK**'.
11. Close the '**Set PG/PC interface**' with '**OK**'.

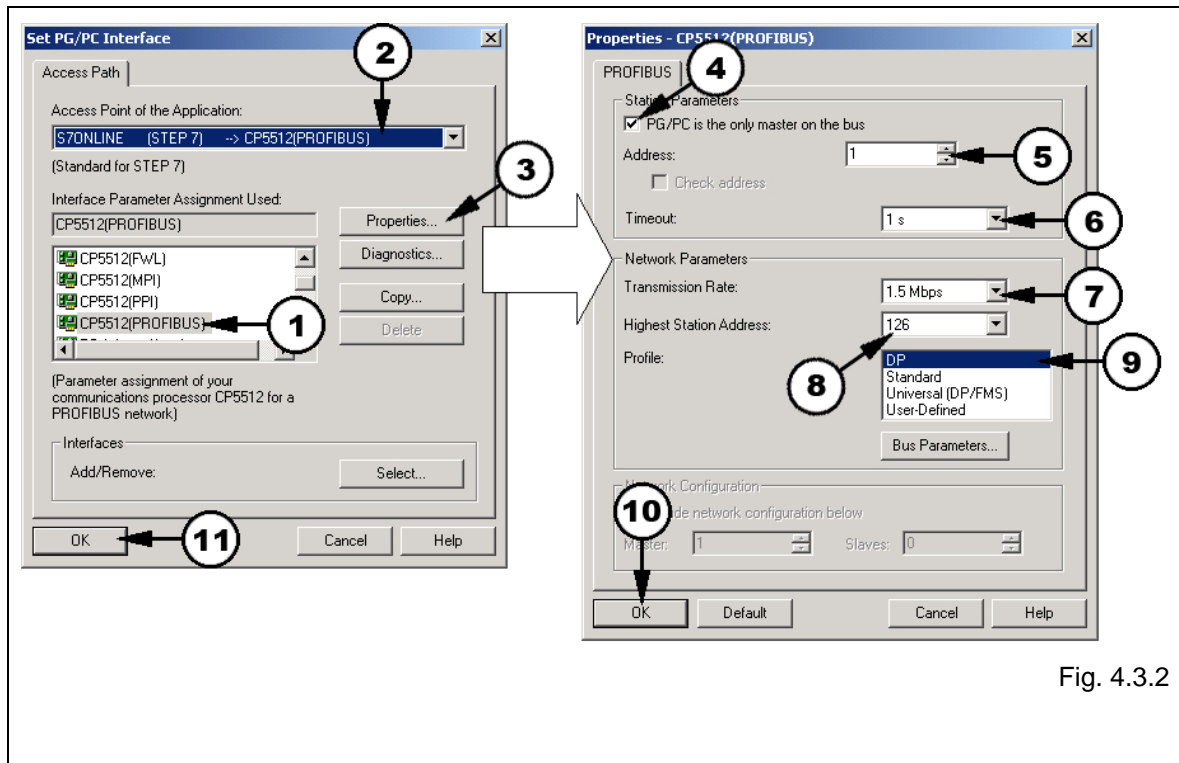


Fig. 4.3.2

Result: A new window opens –'Warning' (Fig. 3.3.3) - if you have to make changes.

4.3.3 Changing the access route

Fig. 4.3.3:

1. Acknowledge this warning with 'OK'.



Fig. 4.3.3

4.4 Parameter upload from the drive

4.4.1 Generating a parameter list

Fig. 4.4.1:

1. In the 'Upload_Download' project, select '**MICROMASTER_420 => MICROMASTER_420**' using the ⊞ character and then click on it using the righthand mouse key; in the windows that open, select '**Expert => Expert list**'.

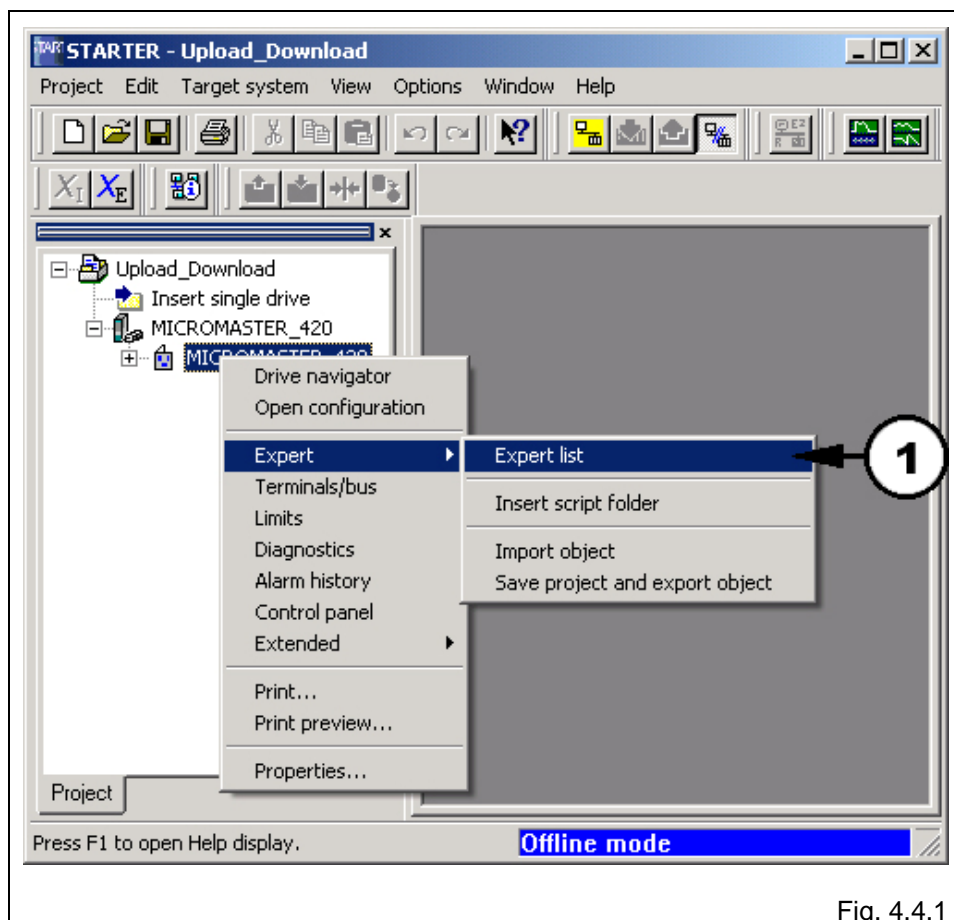


Fig. 4.4.1

Result: The parameter list of the drive opens (Fig. 4.4.2).

4.4.2 Going online

Fig. 4.4.2:

1. Click on the 'Connect to target system'  button to go online.

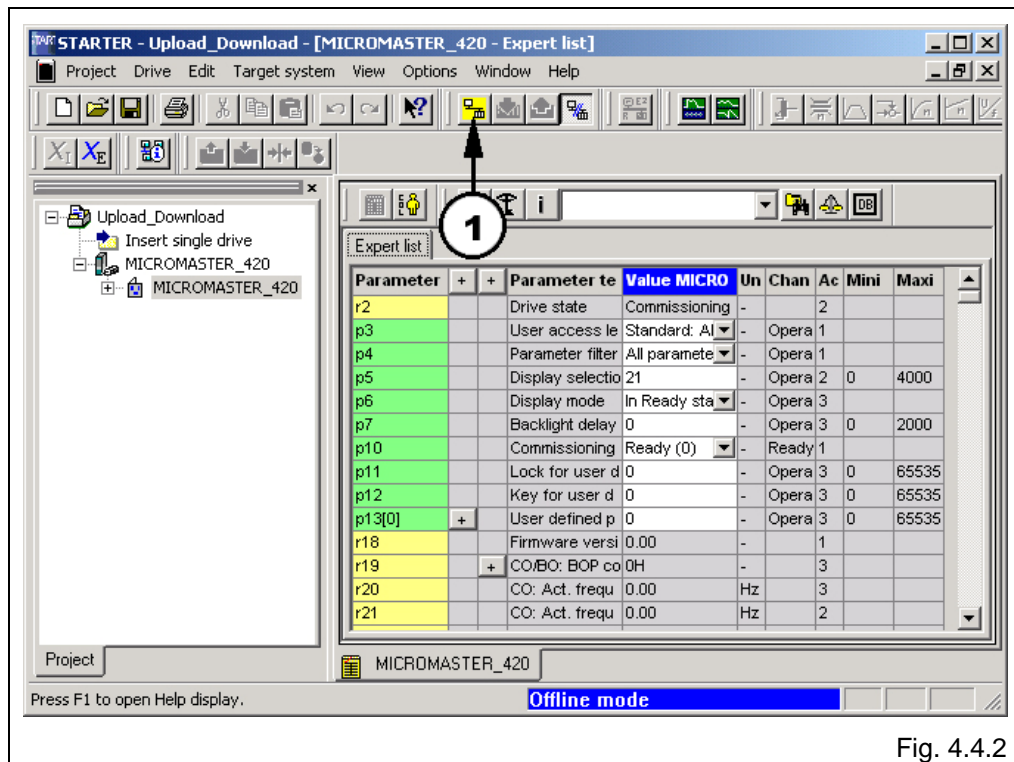


Fig. 4.4.2

4.4.3 An online connection is established

Fig. 4.4.3:

A new window is displayed - 'Connect to target system'.

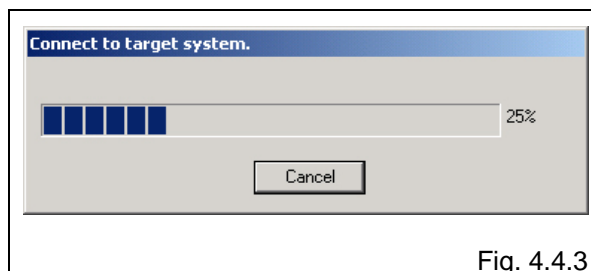


Fig. 4.4.3

Result: The online connection that is established is shown at the bottom right (with a yellow background - 'Online mode') and the parameter list is updated (Fig. 4.4.4).

4.4.4 Parameter upload

Fig. 4.4.4:

1. Click on the 'Load project to PG'  button to upload the parameters from the drive.

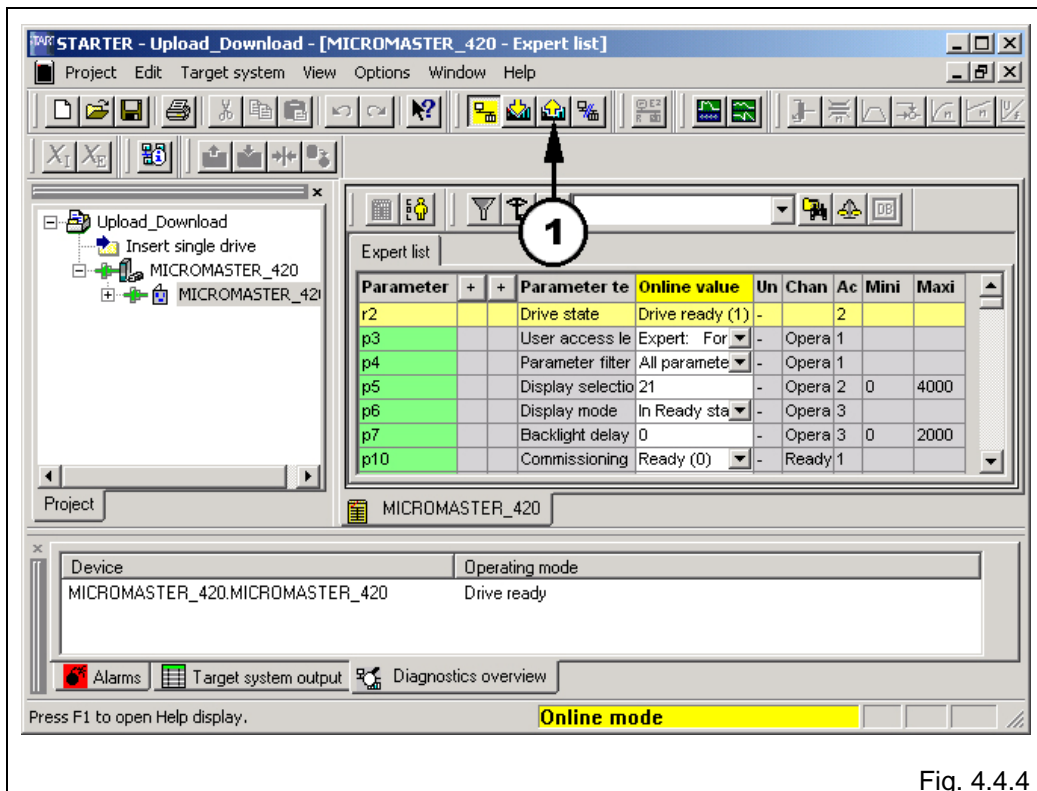


Fig. 4.4.4

Result: A new window opens - 'Load to PG' (Fig. 4.4.5).

4.4.5 Starting a parameter upload

Fig. 4.4.5:

1. Acknowledge this message with 'Yes'.

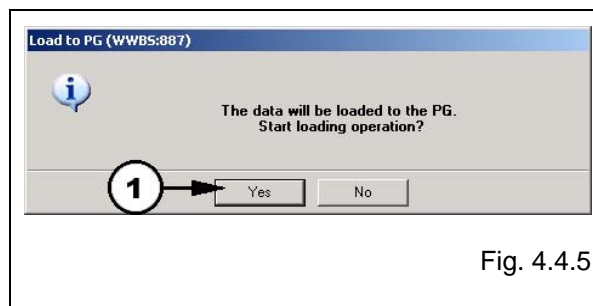


Fig. 4.4.5

4.4.6 Parameter upload

Fig. 4.4.6:

A new window opens - 'Load'.

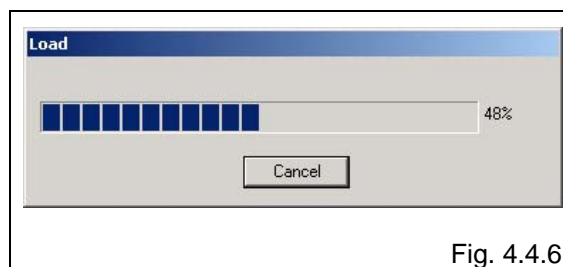


Fig. 4.4.6

4.4.7 Parameter upload completed

Fig. 4.4.7:

1. Acknowledge this message with 'OK'.



Fig. 4.4.7

4.4.8 Parameter upload

Fig. 4.4.8:

1. Select 'Project => Save' in order to save the project.

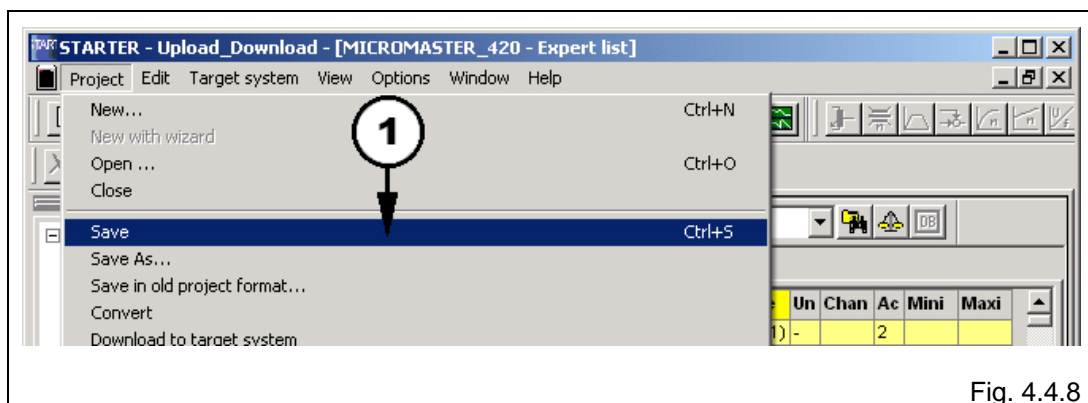



Fig. 4.4.8

Result: The parameter values from the drive inverter are now saved in the 'Upload_Download' project. The project can be used at any time to download parameters; for instance when parameters are lost.

4.4.9 Disconnecting from the target system

Fig. 4.4.9:

1. Click on the - 'Disconnect from target system'  button in order to disconnect from the target system.

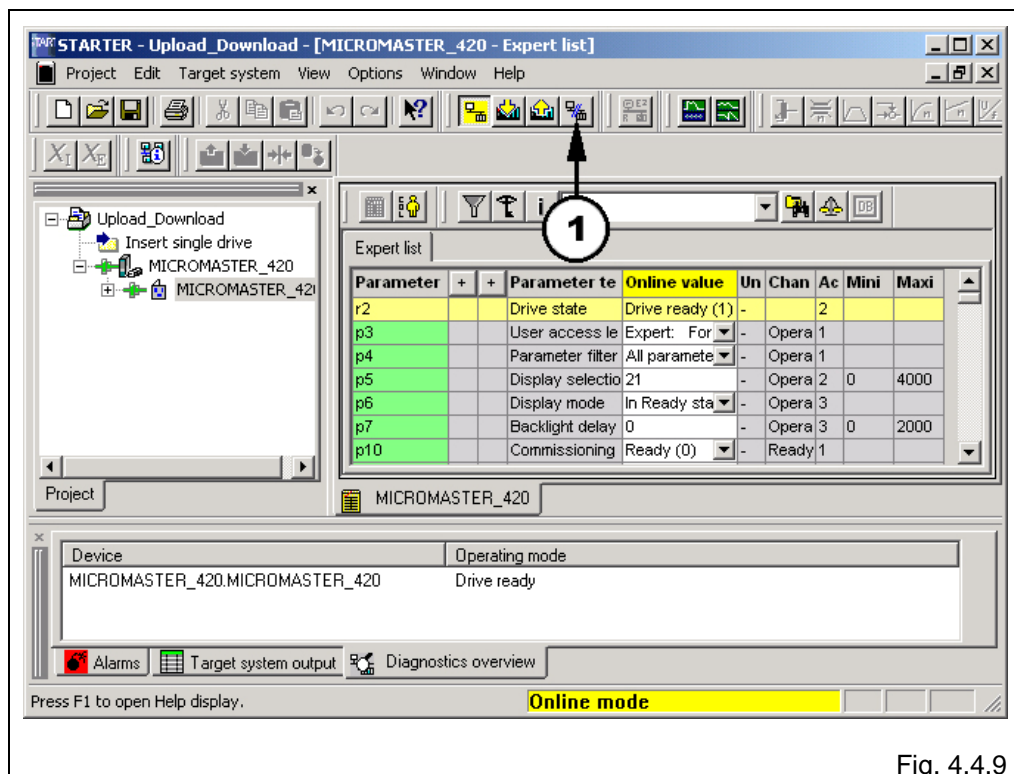


Fig. 4.4.9

4.4.10 Closing the project

Fig. 4.4.10:

1. Select - **'Project => Close'** to close the project.

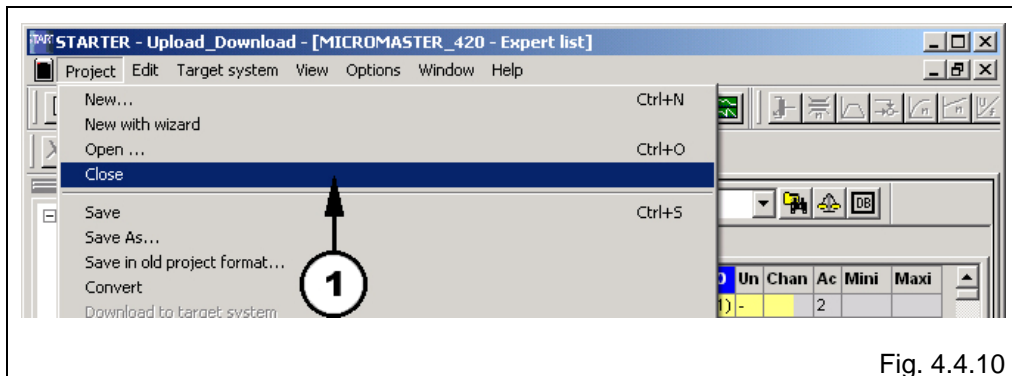


Fig. 4.4.10

4.4.11 Exiting the application

Fig. 4.4.11:

1. You can now close the **'STARTER'** application using: **'Project => Exit'**.

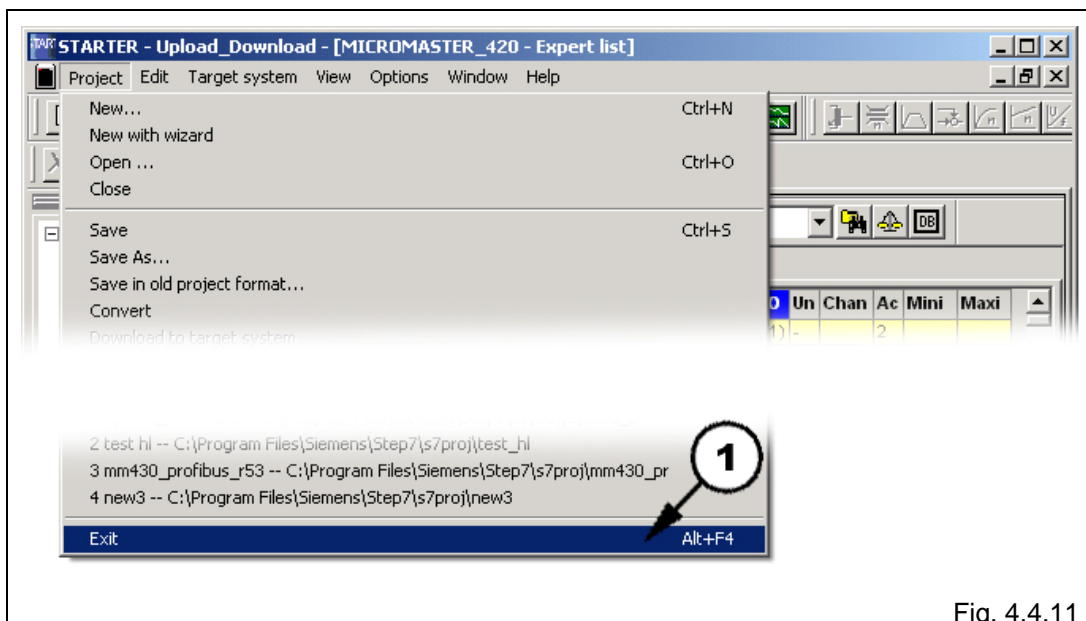


Fig. 4.4.11

5 Download

In order to be able to download the parameters into the drive, the following operator actions are required:

- Start the 'STARTER' application (4.1)
- Open the 'Upload_Download' project using **Project => Open... => Upload_Download => OK'**
- Establish the communications link (4.3)
- Go online (4.4)

5.1.1 Downloading parameters

Fig. 5.1.1:

1. Click on the - 'Load project to target system'  button in order to download parameters into the drive.

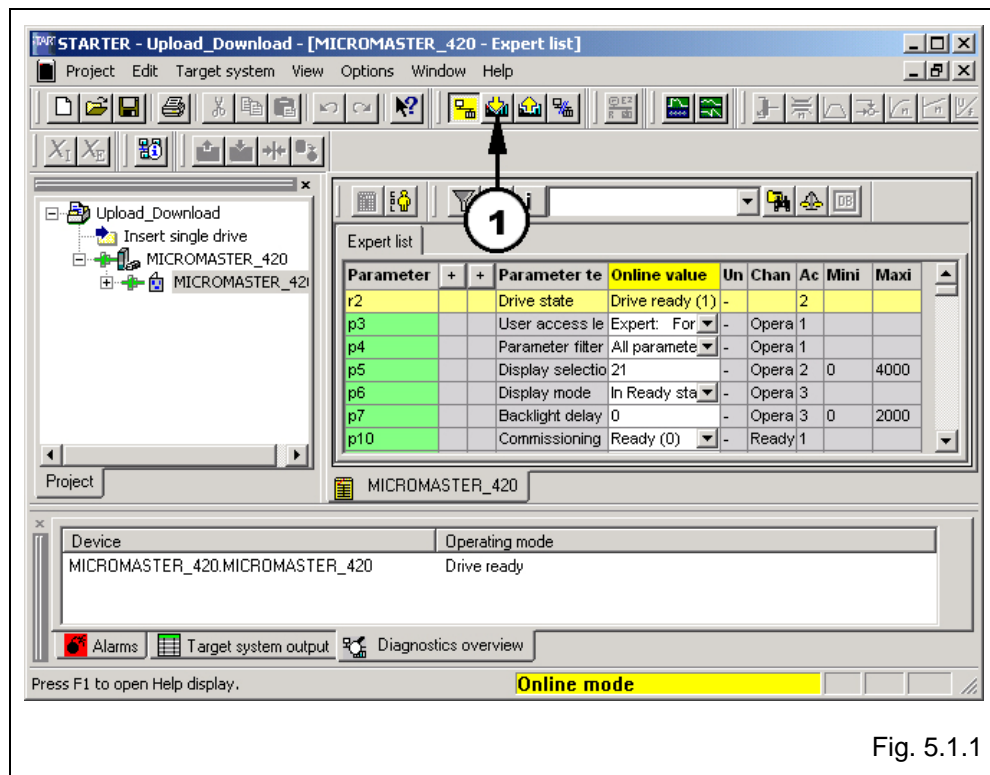


Fig. 5.1.1

Result: A new window opens - 'Download to target system'.

5.1.2 Starting a parameter upload

Fig. 5.1.2:

1. Set the checkmark for - 'After loading, copy RAM to ROM'.
2. Acknowledge with 'Yes'.

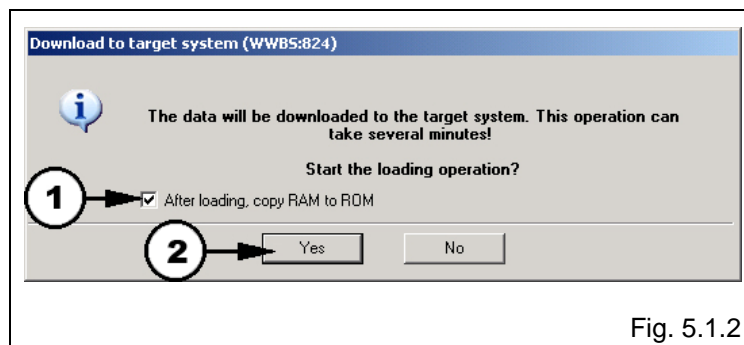


Fig. 5.1.2

5.1.3 Parameter download

Fig. 5.1.3:

A new window appears - 'Load'.

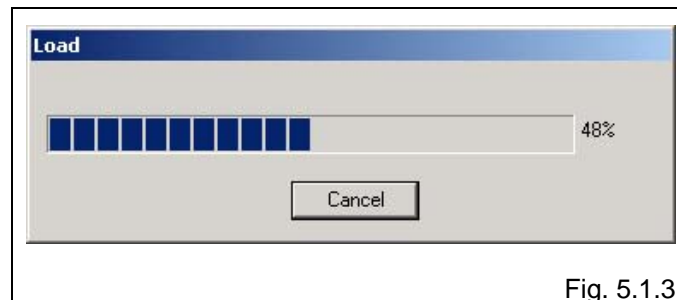


Fig. 5.1.3

5.1.4 Parameter download

Fig. 5.1.4:

A new window opens - 'Copy RAM to ROM'.

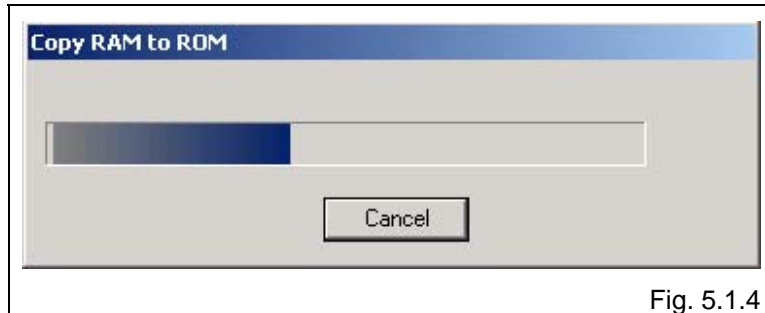


Fig. 5.1.4

5.1.5 Parameter download completed

Fig. 5.1.5:

1. Acknowledge this message with 'OK'.

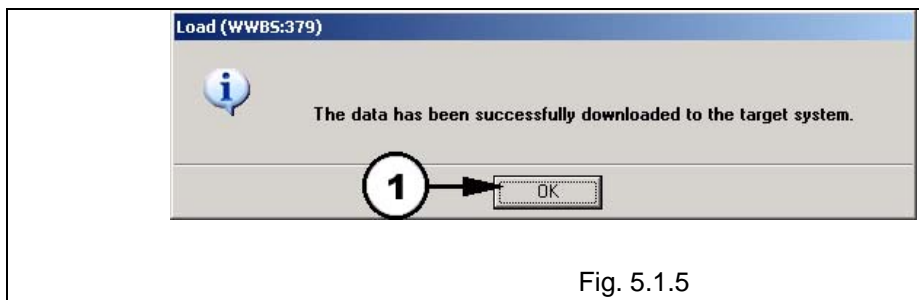


Fig. 5.1.5

Result: The last message signifies that data was successfully downloaded into the target system (MICROMASTER). You can now disconnect from the target system, close the 'Upload_Download' project and exit the 'STARTER' application.