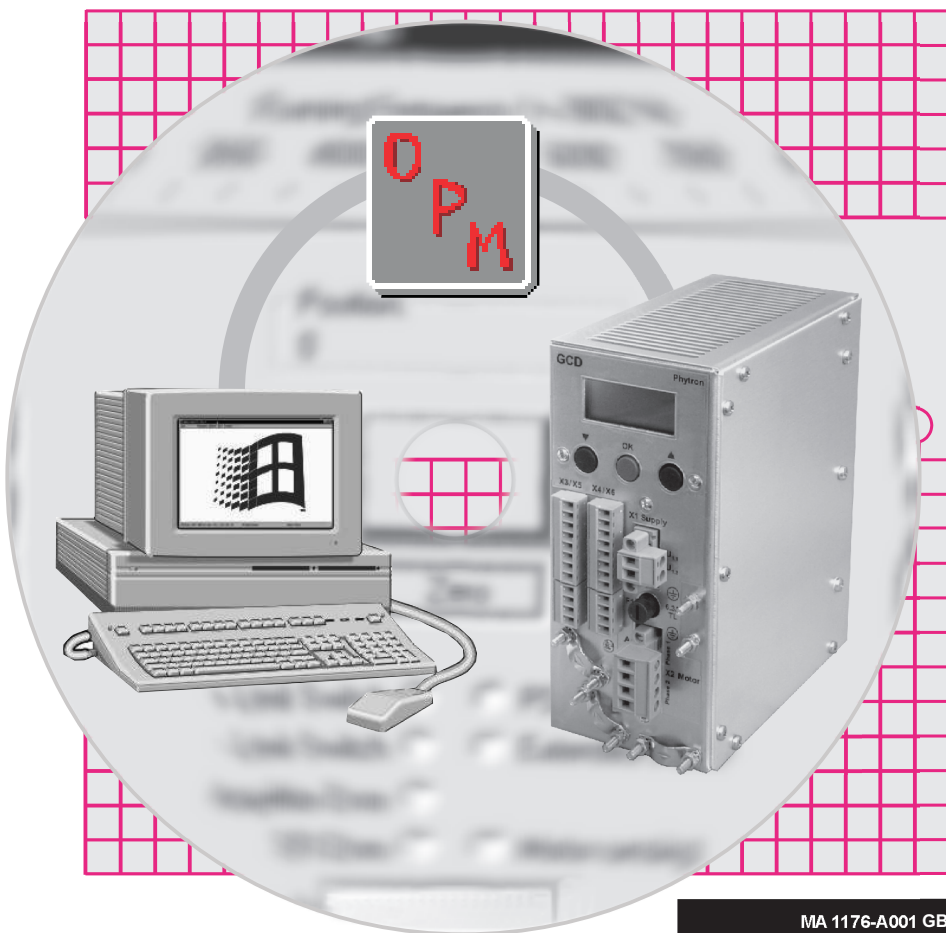


OPM

Communication Program for Stepper Motor Controllers



OPM

**Communication Program for
Stepper Motor Controllers GSP, GCD, GLD and IPP**

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Every possible care has been taken to ensure the accuracy of this technical manual. All information contained in this manual is correct to the best of our knowledge and belief but cannot be guaranteed. Furthermore we reserve the right to make improvements and enhancements to the manual and / or the devices described herein without prior notification.

We appreciate suggestions and criticisms for further improvement. Please send your comments to the following e-mail: info@phytron.de

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Manual OPM

1 What is OPM ?

OPM is a WINDOWS[®] program for data exchange between PC and the **PHYTRON Stepper motor Control units** (PSC) GSP, GCD, GLD and IPP via the serial interface RS232.

1.1 System Requirements

OPM can be used on PCs with at least the following features:

- Operating system Windows[®] 95, 98, 2000 or NT[®]
- At least 32 MB RAM free
- Mouse
- Floppy disk drive 3,5“, in case of disk program installation
- Free interface RS232 for controller connection

1.2 Program Start

Start the program **OPM** with the Windows Explorer by double-click on the file **OPM.exe**.

2 The Working Environment Used by OPM

After the successful program start of OPM the desktop will show up like in Fig. 1:

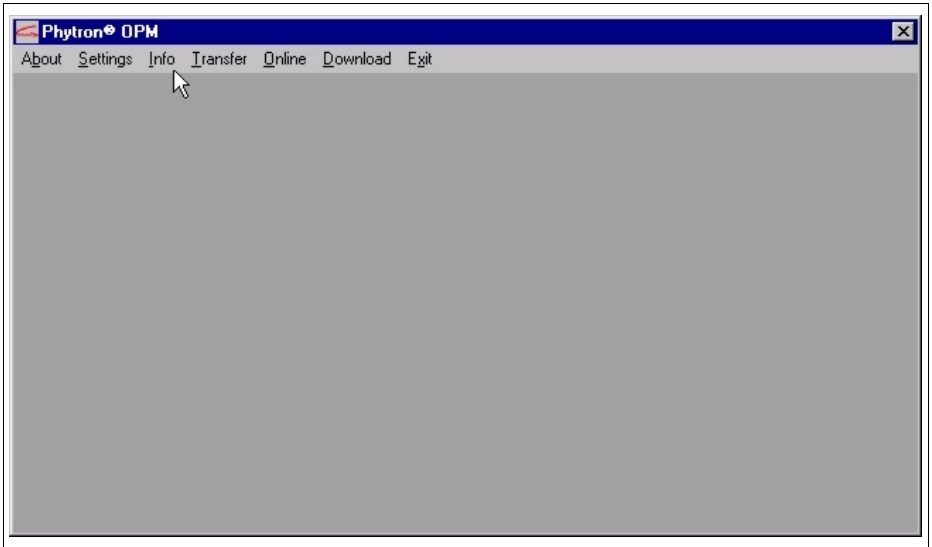


Fig. 1: Desktop after program start

3 The OPM Menus

In this chapter you will find a detailed description of each single menu command, dialog box, switch etc., which are displayed in English language on the screen.

3.1 The Menu *About*

The menu ***About*** gives important information about program version of OPM, copyright and Phytron's firm data Fig. 2:

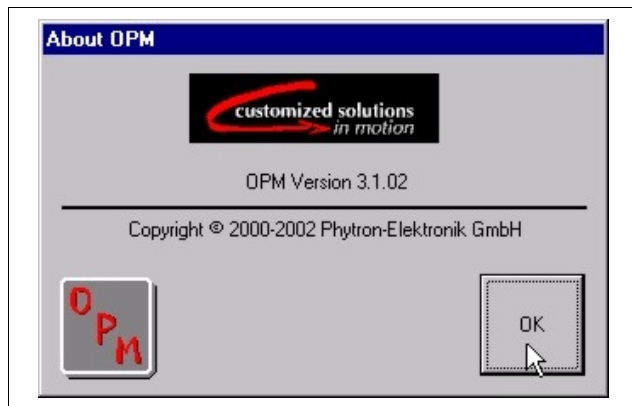


Fig. 2: Information about OPM

By clicking the button **OK** the menu is quitted.

3.2 The Menu *Settings*

In the menu **Settings** you can set the communication parameters, which are necessary for the connection between PC and the PSC Fig. 3:

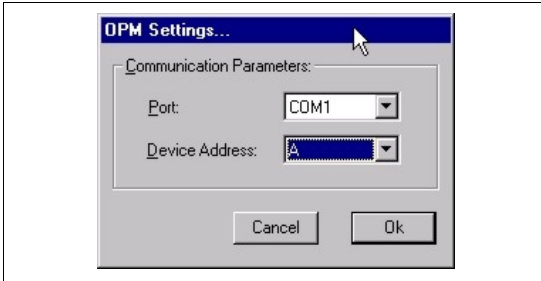


Fig. 3: Parameter settings

In **Port** you can select the COM interface with the DropDownKey (COM1 to COM2).

In **Device Address** you can select the address (0 to 9, A to F), which is set in the control unit.

With the button **Cancel** you can quit the menu, without saving the inputs.

With **OK** you can quit the menu by taking over the inputs.

3.3 The Menu *Info*

By clicking on **Info** the program is reading the type of controller in the background.

After a successfully search, the desktop shows the following message:



Fig. 4: Control unit's information

You can see the connected device, the system code and the BIOS Code.

3.4 The Menu *Transfer*

In **Transfer** you can 'talk' with the PSC, that means that you can read data from the controller or you can send data to the controller. The file type is saved with the suffix *.OPM.

In the submenu **Send data to device** an existing file can be sent to the PSC:

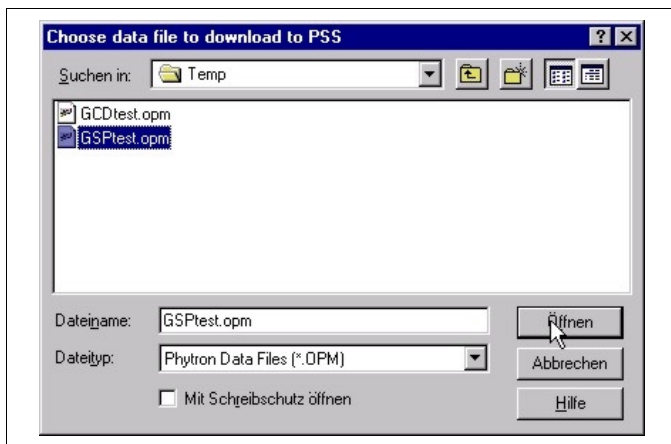


Fig. 5: Choose the data file to download to PSC

In the submenu **Receive data from device** a new file can be created or an existing file can be overwritten:

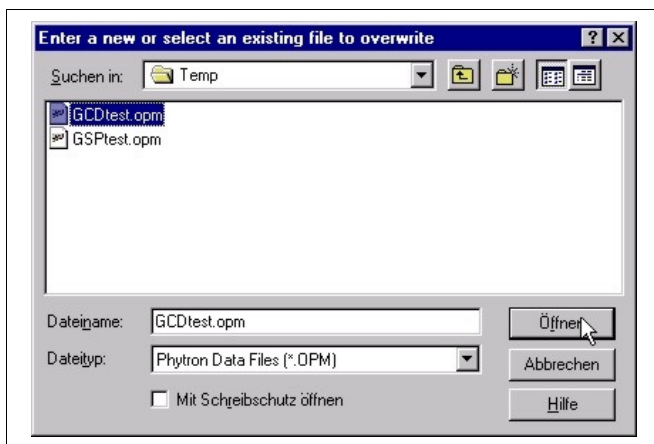


Fig. 6: Choose a new or existing file for overwriting

3.5 The Menu *ONLINE*

With ONLINE operation you can move the stepper motor directly by mouse click and scan different output status (Fig. 7:). In the main menu window you can see the control commands (SPS sequences) on desktop Fig. 9:.

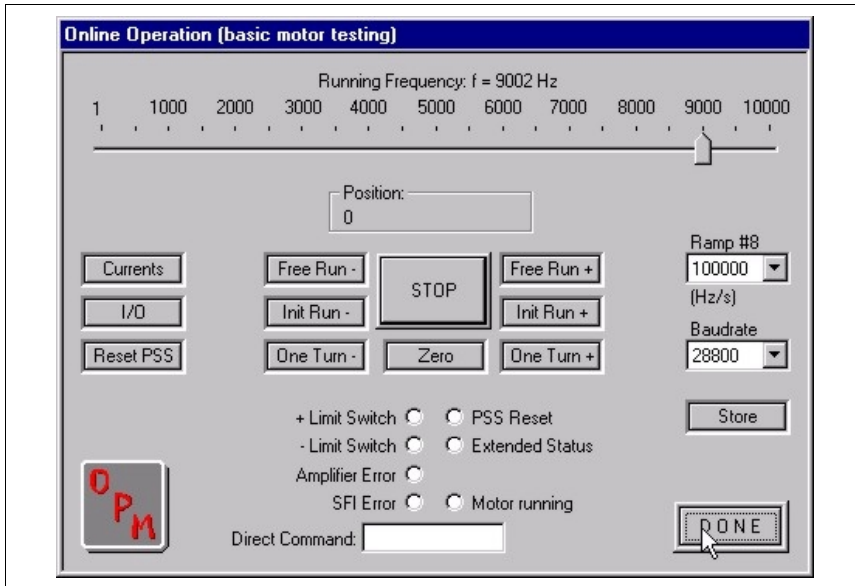


Fig. 7: Online operation for motor testing

Buttons:

Running frequency: Setting the motor drive frequency with the slider control

Position: Display positioning counter

Free Run -: Motor moves in reverse direction.

Free Run +: Motor moves in preferential direction.

Init Run -: Find initiator in reverse direction.

Init Run +: Find initiator in preferential direction.

One Turn -: Relative moving in 1600/8 steps in reverse direction

One Turn +: Relative moving in 1600/8 steps in preferential direction

Zero: Motor moves to position zero.

STOP: Motor stops the moving.

Manual OPM

Ramp #8: Setting the ramp steepness with the values 5000,12500,25000,37500,50000,62500,75000,87500,100000 or 120000 Hz/s.

Baudrate: Setting the baudrate by 9600 or 28800 (For GCD and GLD also 14400, 19600 or 19600) Bits/s.

Store: Storing the set values in the control unit

Done: Quitting the menu ONLINE without storing the values, the set baudrate remains unvaried

Short status values:	+ Limit Switch
	- Limit Switch
	Amplifier Error
	SFI Error
	PSC Reset
	Motor running
	Extended Status

Remark:

- + means the rotation clockwise, if viewed on the motor axis
- means the rotation counterclockwise, if viewed on the motor axis

Direct Command:

Here you can send single commands directly to the controller.

Extended Status:

In the **Extended Status** you can see further output status information.

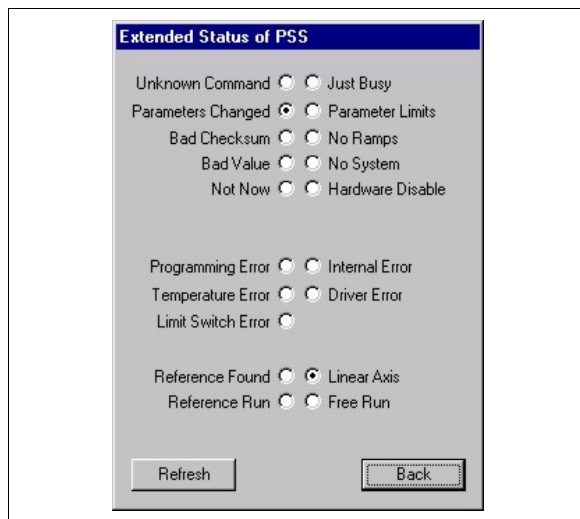


Fig. 8: Extended Status

With the button **Refresh** a new status is requested.

You can go back to the **ONLINE** menu by clicking on the button **Back**.

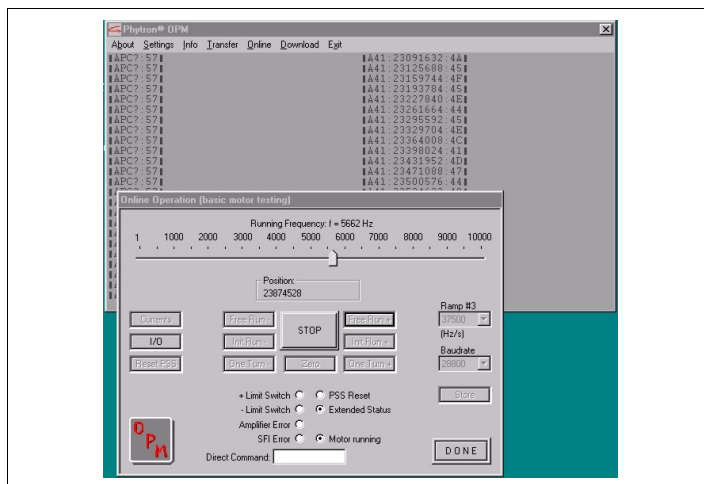


Fig. 9: SPS sequences protocol

3.6 The Menu *Download*

With **Download** you can load a Phytron system file into the PSC. The file type of the system file is stored with the suffix *.PHY.

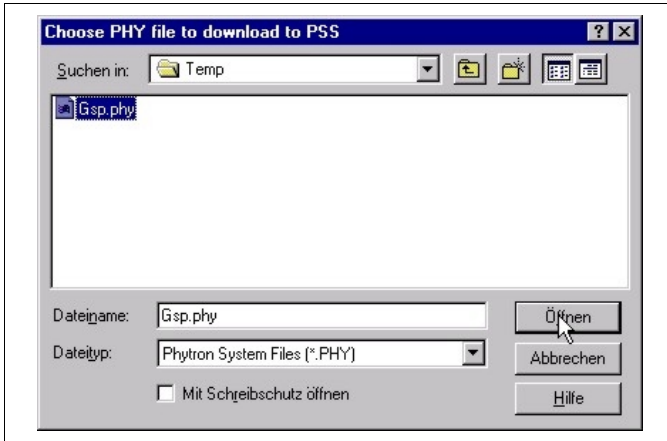


Fig. 10: Choose Phytron system file to download to PSC

3.7 The Menu *EXIT*

With **Exit** you finish the OPM program and go back to the preset Windows user surface.

4 Error Messages

Selected COM-interface cannot be opened

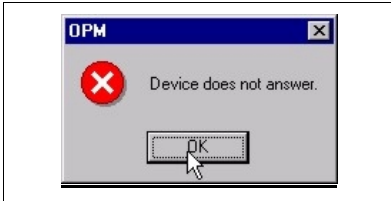


Possible reasons for this problem may be:

- The COM interface is used by another device.
- The COM interface does not exist.

Device (PSC) not ready

If you have input wrong device settings in the menu **Settings**, the program looks for the connected device by changing the baudrate five times. Wrong options or missing device is shown on the desktop with the following message:



Possible reasons for this problem may be:

- Wrong device address
- Wrong COM address
- The cabling is wrong (are the RD and TD pins interchanged?).
- The controller is in the SETUP mode (for GCD and GLD).
- The cabling is defect or interrupted.

File not found



Possible reasons for this problem may be:

- Wrong file input or file does not exist in this directory

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OPM as a freeware product will only give you the right to make backup copies for personal use. However, the program must not be changed neither be sold.

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