### **Optimization of the computer and the system** *for using WinPC-NC Light and WinPC-Economy*

Following operating manual provides instructions concerning the optimization of an existing Windows XP system in order to get a faultless run of the realtime modules of *WinPC-NC Light* and *Economy* without any interferences by other processes.

The displayed screenshots are adopted from a computer as sample and may differ slightly from your systems. Using Windows 2000 instead of Windows XP, additional deviations may occur. However, the basic instructions apply to all systems and are similiar to each other. It is advisable to contact an expert if you are inexperienced in this subject or uncertain in operation.

Probably it will not be necessary to carry out all described steps. Please effect those actions promising the best results. Furthermore, multiple tests are recommended in order to try out the running course of motors and realtime control.

## 1. Deactivating Firewall, virus scanner and automatic updates

Open the *Control panel* under *Start-settings* and select *Security Center*. Now deactivate the internal Firewall, the automatic updates and the virus scanner. This action is confirmed by closing the safety center.



# 2. Deactivating additional background programs

Open the window *System Properties* by clicking the right mouse button to *My Computer* and *Properties*. Select now the category *System Restore*. Activate the setting *Turn off System Restore* by clicking the checkbox.

annaoperu				
General	Compu	iter Name	Hardware	Advanced
System Restore Automatic Updates Remote				
Syster compu	m Restore c uter.	an track and r	everse harmful chan	ges to your
Turn off Sy Disk space u	stem Restor sage	e		
Move the slid amount of dis may reduce t	fer to the rig sk space for the number (	ht to increase System Resto of available re:	or to the left to decre re. Decreasing the c store points.	ease the lisk space
Disk space	e to use:			
Min —			Ma:	
1			Y	
	2	20% (400 MB)		
Status				
🖃 (C:) Tur	ned off			

Continue the procedure by selecting the window *Advanced* and *Error Reporting*. Now deactivate *Error Reporting* for system and programs.

System Properties					
General Computer Name Hardware Advanced System Restore Automatic Updates Remote					
Select the ways that this computer can be used from another location.					
Remote Assistance					
Allow Remote Assistance invitations to be sent from this computer					
Learn more about <u>Remote Assistance</u> .					
Advanced					
Remote Desktop					
Allow users to connect remotely to this computer					
Full computer name: alarmstu-25v5s1					
Learn more about <u>Remote Desktop</u> .					
Select Remote Users					
OK Cancel Apply					

Select *Advanced* followed by *Performance Options*. Activate *Best performance* in the category *Visual Effects*.

System Pr	operties	? ×			
Error Repo	You can choose to have software errors	Remote Advanced			
<b>3</b>	reported to Microsoft to help improve future products.	se changes.			
	Disable error reporting	al memory			
4	But notify me when critical errors occur				
0	Enable error reporting				
	Programs Choose Programs	iettings			
	OK Cancel				
		Settings			
	Environment Variables Error Reporting				
	OK Cancel	Apply			

Select the window *Remote* and deactivate all functions by removing the hooks from the checkboxes.

System Properties	<u>? ×</u>
Performance Options	?×
Visual Effects Advanced	[]
Select the settings you want to use for the appearance and performance of Windows on this computer.	
C Let Windows choose what's best for my computer	
C Adjust for best appearance	
Adjust for best performance	
C Custom:	
<ul> <li>Animate windows when minimizing and maximizing</li> <li>Fade or slide menus into view</li> <li>Fade or slide ToolTips into view</li> <li>Fade out menu items after clicking</li> <li>Show shadows under menus</li> <li>Show shadows under mouse pointer</li> <li>Show vindow contents while dragging</li> <li>Slide open combo boxes</li> <li>Slide taskbar buttons</li> <li>Smooth edges of screen fonts</li> </ul>	-
OK Cancel Ap	

Select *Advanced* under *Performance Options* in the same window. Activate *Background services* and *System cache*.

System Properties	? ×
Performance Options	
Visual Effects Advanced	
Processor scheduling By default, the computer is set to use a greater share of processor time to run your programs. Adjust for best performance of: C Programs C Background services	
Memory usage By default, the computer is set to use a greater share of memory to run your programs. Adjust for best performance of: C Programs C System cache	
Virtual memory A paging file is an area on the hard disk that Windows uses as if it were RAM. Total paging file size for all drives: 420 MB Change	
OK Cancel Apply	ゴ님

#### 3. Changing display options

Activate display options by clicking the right mouse button on to the desktop background and select the option *Windows Classic* under *Themes* and *Appearance*.

Themes       Desktop       Screen Saver       Appearance       Settings         A theme is a background plus a set of sounds, icons, and other elements to help you personalize your computer with one click.       Theme:         Theme:       Save As       Delete	Themes Desktop Screen Saver Appearance Settings
A theme is a background plus a set of sounds, icons, and other elements to help you personalize your computer with one click. Theme:           Windows Classic         Save As         Delete	Inactive Window
Theme:           Windows Classic         Save As         Delete	
Sample: Active Window	Active Window
	Windows and buttons:          Windows Classic style         Color scheme:         Windows Standard         Font size:         Normal

Display Properties		<u>? ×</u>
Themes Desktop Scree	en Saver Appearance Settings	1
	. o	
Background:		
Ascent     Ascent     Ascent     Actumn     Azul     Bliss     Blue Lace 16     Customize Desktop		Browse Position: Stretch Color:
	OK Cancel	Apply
Power Options Properties Power Schemes Advance Select the power this computer. I	s ed Hibernate UPS   er scheme with the most appropriat Note that changing the settings bel	? ×
Power Options Properties Power Schemes Advance Select the power this computer. the selected sc	s ed Hibernate UPS rer scheme with the most appropriat Note that changing the settings belicherne.	e settings for ow will modify
Power Options Properties Power Schemes Advance Select the power this computer. I the selected sc Power schemes Always On	s ed Hibernate UPS Note that changing the settings belichere.	? × e settings for ow will modify Delete
Power Options Properties Power Schemes Advance Select the power this computer. I the selected sc Power schemes Always On Settings for Always On	s ed Hibernate UPS er scheme with the most appropriat Note that changing the settings bel theme. Save As power scheme	e settings for ow will modify
Power Options Properties Power Schemes Advance Select the power this computer. I the selected sc Power schemes Always On Settings for Always On Turn off monitor:	s ed Hibernate UPS rer scheme with the most appropriat Note that changing the settings bei sheme. Save As power scheme Never	? × e settings for ow will modify Delete
Power Options Properties Power Schemes Advance Select the power schemes Power schemes Always On Settings for Always On Turn off monitor: Turn off hard disks:	s ed Hibernate UPS er scheme with the most appropriat Note that changing the settings bei cheme. Save As power scheme Never Never Never	? × e settings for ow will modify ■ ■ ■ ■ ■ ■ ■ ■
Power Options Propertie         Power Schemes       Advance         Select the power schemes       Select the power schemes         Power schemes       Always On         Always On       Settings for Always On         Turn off monitor:       Turn off hard disks:         System standby:       System standby:	s ed Hibernate UPS er scheme with the most appropriat Note that changing the settings bel cheme. Save As power scheme Never Never Never	? ×       e settings for ow will modify       Image: setting the
Power Options Propertie Power Schemes Advance Select the power the selected sc Power schemes Always On Settings for Always On Turn off monitor: Turn off hard disks: System standby:	s ed Hibernate UPS er scheme with the most appropriat Note that changing the settings bel theme. Save As power scheme Never Never Never	?       e settings for ow will modify       Image: setting the se

Select the category *Desktop* and switch off the background pictures. Please deactivate all functions of the screen saver in the dialog box *Screen Saver* as well as all functions und times in the box *Power Options*. It is recommended to select *Always On* and the parameter *Never* with all shutdown times and functions.

<b>Display Properties</b>		? X
Themes Desktop	Screen Saver Appearance Settings	
Screen saver	Settings Preview	
Monitor power	To adjust monitor power settings and save energy click Power. Power	
	OK Cancel Ap	ply

es W the Constant			× 67
s Stored on This Ce	ocal Disk (C:) Proper	ties	71
	General Tools   Ha	dware   Sharing   Guota	
Shared Docum		an an tha said tha said th	
	~ !		
d Disk Drives	Type Local	Diek	
tocal back (C)	File system NTFS	6	
	Used space:	1.676,103,168 bytes 470 873,474 bytes	1,56 GB
rices with Removal	The space	wrother were byone	440 Ptu
1.1	Capacity	2.146.926.692 bytes	1.99 GB
3 % Floppy (A)			
		Drive C	Delli, Cilianup
	22	N. 1922	
	Allow Indexing Se	o save cars, space avaice to index this datic for fa	at file searching

#### 4. Deactivating the drive index

Select successively your harddisk drives under *My Computer* by a right mouse click and open the dialog box *Properties*. Deactivate the function *Allow indexing service*.

## 5. Removing programs and services which are not required when starting the system

Select the command line under *Start-run*...and insert *msconfig* in order to start a system program. Select *Services* and check the register for useless or not required services. It is recommended to deactivate most of these programs.



Save your settings by the parameter *Apply* and *ok* and restart your computer.

Run	<u>? ×</u>
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:	msconfig
	Ŕ
	OK Cancel Browse

The same procedure has to be effected under the category *Startup* with the automatic loading programs. For testing purposes you can deactivate programs which are not required or whose necessity or function is unknown.

Startup Item	Conmand	Location
III Avart	COProgramme/Antive	HILM(SOFTWARE)Monosoft/Windows/Current/ver.
C ctimon	C-[WINDOWSJaystam	HICLI(SOFTWATE)/Herosoft/Windows/CurrentVer
Total Commander	C-(PROGRA1/8x8ak	Ratup
🗖 schedrip	*C/(Programme)/Gemei	SOFTWARE(/floxosoft/Windows)/Current/Version/As
MediaDetect	Criprogramme/Conelj	SOFTWARE(Placesoft/Windows)/CurrentVersion/Re
DLACTRLW	C:[WINDOWS];SysRem	SOFTWARE(Microsoft/Windows)CurrentVersion/R
DM0Launcher	C:(Programme)/DelR/Me	SOFTWARE(Microsoft/Windows)/CurrentVersion/Ri
□ €_1200C2	Cliprogramme/EPSON	SOFTWARE(/Horosoft/Windows);OurrentVersion(R)
fpdsp5a	"CIWINDOWS(Syste	SOFTWARE(/Horosoft/windows)/Current/Version(R)
hierd	C:(WINDOW/Splystem	SOFTWARE(Microsoft/Windows)CurrentVersion/Ru
· Construction	Sector resources with	
		Anna 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

#### 6. Optimizing adjustments in the BIOS of the computer

A lot of settings affecting usual operation are already integrated in the BIOS of the computer. However, they may interfere realtime operation. In order to be able to modify these settings, you have to shut down or restart the computer. At the beginning of the BOOT operation you have to press a specific key. Normally this key is displayed and it is either key (F2) or key (F8).

You should proceed with the greatest possible care when modiyfing these settings. In order to avoid problems, it is recommended to contact an expert. The used pages and displays depend on the manufacturer of the computer or of the BIOS and are not similiar with all computers. Following tips are examples and given for possible optimizations.



Advanced			
I/B Device Configuration			Item Specific
Unboard FDC Swap A & B Onboard Scrial Port 1	[No C3F8	Swap] H/IRQ4]	(Enter) to self operation mode Parallel Port.
Onboard Scrial Port 2 UANT2 Use as Emboard Parallel Port	Hormal EPP ECP ECP+EPP	1RQ31 ort] 1RQ71 []	'ECP' or 'ECP+I lead you to DW select entry.
• Unboard Peripheral Resource Unboard CIR 1/0	Cont <b>Cont</b> Dis	abled]	

*Normal, SPP* or *compatible mode* should be selected for the mode settings of the parallel printer port LPT. The corresponding term may vary from BIOS to BIOS. In any case you should avoid the setting of one of the actual bi-directional modes.

All options for the *Power management* settings should be deactivated, this means deactivation of any mechanisms for power savings .

Additional computer components as modem, sound, networks, USB ports, etc. should mereley be activated if required. Everything else can be deactived.

Augultus Sever District		
	-	Item Specific Help
Uiden Off Option Viden Off Method HDD Tower Down Sampend-to-BAM Capability	[Always On] [Blank Screen] [Disabled] [Disabled]	(Enter) to select the Power Saving Mode. Yo can select 'User Befi to go to the Suspend Mode entry below.
Suspend Mode PSR Button < 4 Secs: CPU Thermal Option	[Disabled] [Soft Off] [Throttle]	
Fuser Up Control > HardWare Munitor		12

This manual has been thoroughly compiled and all indications should be considered as a kind of proposal. Tests concerning computer optimization should be cautiously carried out. Any feedback from users concerning this subject is appreciated.

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