**Operating Instructions** 



Documentation for software version 2.4, last updated: 25.10.2023 Technical and editorial content subject to change without notice

# **Operating Instructions**

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#### 1 General Information

These operating instructions are intended for the following target group: certified electricians in accordance with DIN VDE 0105 and authorised qualified personnel. They explain how to safely and professionally work with the monitoring system. The general safety regulations and local accident prevention regulations applicable to the area of use as well as other instructions and safety notices must be observed. The operating instructions, especially the section on safety, should be read in full before starting any work on the system.

These operating instructions have been compiled under consideration of the applicable regulations. These operating instructions should be kept close to the system at all times and be freely accessible to everyone working with the system.

All legislation, standards and guidelines of the country in which the system is set up and operated should also be observed.

The manufacturer provides no guarantees and assumes no liability for damage, or subsequent damage, resulting from:

- non-intended use
- unauthorised or improper changes to the system's connections, settings or programming
- failure to observe regulations and rules of conduct for safe operations

Packaging materials are not waste, but valuable materials which should be reused or recycled.

Batteries and electronic components contain materials, which will cause harm to human health and the environment if not properly disposed of. National guidelines and regulations for correctly disposing of used batteries and electronic components should be observed!

#### 2 Introduction

The Wireless Professional CPC3 is a headless embedded computer with a separate power supply in the DIN-rail housing and features a Linux operating system as well as the Wireless Professional software.

The Wireless Professional CPC3 is intended for use in a network (LAN or WLAN) in conjunction with a remote access point; it satisfies the requirements of an automatic test system in accordance with EN 62034.

The CPC3 needs an Internet connection for automatic safety updates.

The CPC3 is equipped with a manipulation-protected operating system.

#### 3 Technical Data

Processor chip set	ARM Cortex-A72 quad
Processor clock speed	1.5 GHz
RAM	4 GB SDRAM
LAN	Gigabit Ethernet
WLAN	IEEE 802.11.b/g/n/ac (2.4 and 5 GHz)
Bluetooth	5.0
USB	2x 2.0 / 2x 3.0
Power consumption	max. 15 W
Dimensions	H 92mm x W 105mm x D 56mm
	including power supply
Type of mounting	DIN-rail
Operating temperatures	+15 °C to +25°C

### 4 Connection Diagram



#### 5 Commissioning

The wireless professional system must be commissioned in accordance with the software manual.

**Important!:** Commissioning must be completed by restarting the Wireless Professional CPC3. We also recommend carrying out a manual backup to an external storage medium after commissioning.

#### 6 Establishing Remote Connection

The Wireless Professional CPC3 provides various means of establishing remote connections. A remote connection can be established from the local network via a VNC program or from the Internet via RustDesk.

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6.1 Establishing a remote connection with VNC

For security reasons, a RealVNC Viewer (referred to as VNC Viewer in the rest of the text) is needed to establish a VNC connection. For a VNC connection to be possible, the CPC3 must be in a network with the device on which the VNC Viewer is running. A network connection with the CPC3 can be established via both WLAN and an Ethernet cable.

6.1.1 Connecting with the WLAN Upon delivery, the CPC3's WLAN interface is configured as an access point and transmits a WLAN signal.

The CPC3's WLAN name (SSID) can be found in the accompanying info sheet as can the WLAN connection password.

6.1.2 Ethernet cable connection

Upon delivery, the CPC3's Ethernet interface is configured as a DHCP device such that the CPC3 can be connected to a router or an existing cable network with a DHCP service. There is no longer a static IP address upon delivery. To find the CPC3's IP address, the device can be identified on the DHCP server via the MAC address of the Ethernet interface. The MAC address is stated on a sticker on the side of the CPC3. If necessary, please contact your IT administrator for details of the dynamically issued IP address.

In these instructions, the network connection is established using WLAN by way of example. As soon as a network connection has been established, the VNC Viewer should be started.

**Note:** The CPC3's VNC server only supports one connection at a given time. It is not possible to have two or more connections at the same time.

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RealVNC Viewer	_		$\times$
Datei Ansicht Hilfe			
RVNC CONNECT VNC Server-Adresse eingeben oder suchen	_ <b>_</b> <u>A</u> r	nmelden	··· •
Fensier zusichneiden			
Melden Sie sich bei Ihrem RealVNC-Konto an, um Teamcomputer automatisch zu ermitteln.			
Oder geben Sie die IP-Adresse bzw. den Hostnamen von VNC Server in die Suchleiste ein, um direkt eine Verbindung herzu	ıstellen.		

To establish the connection, the IP address of the CPC3 is entered in the VNC Viewer's address field.

RealVNC Viewer	– 🗆 X
Datei Ansicht Hilfe	
<b>RVNC CONNECT</b> 10.3.141.1	Linmelden 🔻
Fenster ausschneiden Ihr Adressbuch enthält derzei Melden Sie sich bei Ihrem RealVNC-Konto an, um To Oder geben Sie die IP-Adresse bzw. den Hostnamen von VNC Server in	t <b>keine Computer.</b> amcomputer automatisch zu ermitteln. die Suchleiste ein, um direkt eine Verbindung herzustellen.

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The address "10.3.141.1" is the static IP address of the CPC3's WLAN access point. Upon delivery, each CPC3 can be accessed using this address.

As soon as the entered address has been confirmed by clicking on "Enter", the connection is established.



When the VNC Viewer is run on the device for the first time, the message is displayed via an unencrypted connection. The VNC connection password is transferred securely.

₹ Verschlüsselung ×						
Unverschlüsselte Verbindung						
Die Verbindung zu diesem VNC Server ist nicht verschlüsselt.						
VNC Server: 10.3.141.1::5900 (TCP)						
Ihre Anmeldeinformationen werden sicher übertragen, aber alle nachfolgenden, während der aktiven Verbindung ausgetauschten Daten können von Dritten abgefangen werden.						
Diese Warnung nicht mehr anzeigen.						
Fortsetzen Abbrechen						

If the "Continue" button is clicked on, the input window for the VNC connection password opens.

## **Operating Instructions**

Ruthentifizierung					
Authentifizierung bei VNC Server 10.3.141.1::5900 (TCP)					
VNC Server-Anmeldeinformationen eingeben (Hinweis: NICHT Ihre RealVNC-Kontodaten)					
Benutzername:					
Kennwort:	Ø				
Kennwort speichern Kennwort verg	essen?				
OK Abbre	chen				

The VNC connection password can be found in the accompanying info sheet.

Once the password has been entered correctly and confirmed by clicking on the "OK" button, the CPC3's virtual monitor is displayed.

- 6.2 A remote connection with RustDesk
- 6.2.1 Establishing connection

In order for a remote connection via RustDesk to be established, the Wireless Professional CPC3 must be connected to the Internet.

RustDesk should be started on the device with which the connection to the CPC3 is to be established.

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O RustDesk	-	D X
Ihr Desktop Mit dieser ID und diesem Passwort können Sie auf Ihren Desktop zugreifen. ID É 25 278 979 Passwort ****** © /	Entfernten Desktop steuern Datei übertragen Verbinden	
Aufgrund der UAC kann RustDesk in manchen Fällen nicht ordnungsgemäß auf der Gegenseite funktionieren. Um UAC zu vermeiden, klicken Sie bitte auf die Schaltfläche unten, um RustDesk auf dem System zu installieren	Leer	
Installieren	<ul> <li>Bereit, <u>Für eine schnellere Verbindung, richten Sie bitte Ihren eigenen</u> Verbindungsserver ein</li> </ul>	

The RustDesk ID for the CPC3 is unique to each CPC3 and is noted on the accompanying WL CPC3 info sheet along with the password.

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ACHTUNG!	Wichtige Informationen zu Ihrem WL-CPC! Dieses Blatt enthält Passwörter und weitere Informationen, die Sie während der Inbetriebnahme Ihres WL-CPC benötigen. Bewahren Sie diese Informationen daher sorgfältig auf.
CAUTION!	Important Information regarding your WL-CPC! This sheet contains passwords and other information you will need during the commissioning of your WL-CPC. Store this information therefore carefully.
uftragsnr./Order no.	1234567890
Access Point:	
Encryption:	up-cpc-ap WPA2
Password:	rp-ed:b5:70
http://localhost User: Password:	or http://device-IP-adress admin rp-ed:b5:70
Local User:	rp
Password:	rp-ed:b5:70
VNC Password:	rp-ed:b5:70
Rustdesk ID: Password:	1640745618 mpm33e



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After entering the ID, click on the "Connect" button. The connection to the CPC3 is then established. You are asked to enter the password

0	1559184916	- 🗆 X
	Passwort erforderlich	
	Bitte geben Sie Ihr Passwort ein  Passwort merken  Abbrechen OK	

Once this has been entered, the CPC3's virtual monitor is displayed.



## 6.2.2 Terminating connection

To terminate the remote connection, the RustDesk window should be closed.



RustDesk notes the last connections used so that the ID does not have to be entered again for the next session.

🗘 RustDesk	- □ >	<
Ihr Desktop Mit dieser ID und diesem Passwort können Sie auf Ihren Desktop zugreifen. ID : 25 278 979	Entfernten Desktop steuern 1 559 184 916 Datei übertragen Verbinden	
Passwort ***** • • 🎤	Letzte Sitzungen Favoriten Adressbuch Q Suche ID	
Aufgrund der UAC kann RustDesk in manchen Fällen nicht ordnungsgemäß auf	rp⊜cpc	
der Gegenseite funktionieren. Um UAC	1 559 184 916	
zu vermeiden, klicken Sie bitte auf die Schaltfläche unten, um RustDesk auf dem System zu installieren		
Installieren	<ul> <li>Bereit, <u>Für eine schnellere Verbindung, richten Sie bitte Ihren eigenen</u> <u>Verbindungsserver ein</u></li> </ul>	

### 7 Manipulation-protected Operating System

The Wireless Professional CPC3 is equipped with an operating system, which runs in read-only mode as standard.

This means that any changes to the operating system are lost after a restart.

To make persistent changes to the operating system, it must be switched to readwrite mode.

Different icons are shown on the desktop to indicate which mode the operating system is running in at the present time.

Mode	Desktop symbol	Meaning
Read-only		Changes to the operating system are lost following a restart
Read-write		Changes to the operating system are permanent

Note: Only one of the two icons is displayed at any one time.

Examples of persistent changes to the operating system include changes to the user password or VNC connection password.

If a change is only possible in read-write mode, the operating system provides information to this effect and switches automatically into this mode. Once the change has been made, read-write mode is exited automatically.

Switching between read-write and read-only modes serves to protect the system's security of operation and protects it from being tampered with.

#### 8 Setting Date and Time

Upon delivery, the date and time are set to the time zone "Berlin, Paris, etc... (GMT+2)". The real time clock used with battery buffer allows the time to continue to run even if the CPC3 is switched off.

There are no means of setting the date and time manually.

If the time or date displayed by the CPC3 differ from the actual time, the CPC3 must be connected to the Internet. Once a connection to the Internet has been established, it will take around 1 minute for the CPC3 to automatically receive the date and time from the online time server.

After the CPC3 has been restarted, you can tell that the RTC battery is flat because a modification to the time is documented in the Wireless Professional log file once the application is launched.

If this happens, the CPC3 battery should be replaced.

The steps required to change the battery can be found in the maintenance schedule which is to be found at

/home/rp/Desktop/manual/Wartungsplan\_WLProfessional.pdf

Once the CPC3 battery has been changed, the CPC3 must be connected to the Internet for the internal clock to be reset correctly.

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### 9 Restarting/Shutting Down CPC3

The CPC3 can be restarted and shut down via the Start menu.

Before restarting or shutting down, the Wireless Professional application should be terminated so that the current data status is saved.

#### 9.1 Restart

To perform a restart, go to the Start menu. Then select "Other" followed by "Restart".

Start menu->Other->Restart



Once this has been done, the CPC3 shuts down of its own accord and restarts.

### 9.2 Shutting down

To shut down, go to the Start menu. Then select "Other" followed by "Shut down". Start menu->Other-> Shut down

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Once this has been done, the CPC3 shuts down of its own accord. The CPC3 must then be disconnected from the power supply and then reconnected in order to restart.

#### !Note:

If the Wireless Professional application is to be restarted by the WatchDog, shutting down or restarting can be continued; there is no risk of data being lost.

#### 10 Backup Copy of Wireless Professional Data from the CPC3

The CPC3

#### 10.1 Automatic backup

Every 4 hours, the Wireless Professional CPC3 copies relevant data from the main memory to the USB stick inserted into the CPC3. This ensures that data is backed up onto an external storage medium.

**!Warning:** The USB stick must not be removed during operation otherwise there is a risk of data loss.

**Note:** The USB stick and device form one unit. The USB stick cannot be changed for another USB stick or replaced. If the USB stick is lost, a new one must be ordered as a spare part.

#### 10.2 Manual backup

The Wireless Professional data can only be copied manually from the USB stick in the CPC3.

**!Warning:** The USB stick must not be removed during operation otherwise there is a risk of data loss.

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To copy data from the USB stick, first shut down the CPC3. Once the device has been shut down and disconnected from the voltage supply, the USB stick can be removed.

The USB stick can be read by a computer. The USB stick is displayed as "WLPROSAFE" as a drive on the computer.

🕳   🕑 📙 🖛			Verwalten	WLPROSAFE (D:)					-	o x
Datei Start	Freigeben	Ansicht	Laufwerktools							~ ?
Navigationsbereich	Vorschaufens	ter	Extra große Symbole Mittelgroße Symbole Liste	Große Symbole	↓ Sortieren nach ▼	Gruppier Größe all Größe all	en nach 🔻 iinzufügen 🝷 er Spalten anp	assen	<ul> <li>□ Elementkontrollkästchen</li> <li>☑ Dateinamenerweiterungen</li> <li>△ Ausgeblendete Elemente</li> <li>△ Elemente ausblenden</li> </ul>	) Optionen
Ber	eiche		La	ayout		Aktuelle	Ansicht		Ein-/ausblenden	
$\leftarrow \rightarrow \checkmark \uparrow$	Dieser PC	> WLPRC	DSAFE (D:)				~	ē	WLPROSAFE (D:) durchsuchen	
Name	^		Änderungsdatur	m Typ	Größe					
backup backup2			20.06.2023 14:35 20.06.2023 14:35	Dateiordner Dateiordner						
dl facility			20.06.2023 14:36 03.07.2023 12:09	Dateiordner Dateiordner						
misc			20.06.2023 14:36	Dateiordner Dateiordner						
	Ľ	2								
6 Elemente										

The drive has a folder structure where the CPC3 data is stored. Copying the "backup" folder, copies all the Wireless Professional software data. This can then be stored as a backup.

Once copying is complete, the USB stick should be inserted back into the CPC3 slot from which it was removed.

The CPC3 should be reconnected to the supply voltage. The CPC3 is booted as normal and runs the Wireless Professional software for emergency light monitoring.

#### 11 Moving Systems onto the CPC3

In order for data to be imported to the Wireless Professional CPC3 without any version issues, the version of the Wireless Professional software on the CPC3 must be the same as or higher than the version from where the data originates.

11.1 Moving Wireless Professional from CPC3 to CPC3

If the system is to move from a Wireless Professional CPC3 to a Wireless Professional CPC3, the following are needed:

- USB card reader
- CPC3 Transfer Script (https://rptechnik.freshdesk.com/de/support/home)
- FTP and remote connection on "old" CPC3
- remote connection on CPC3
- 11.1.1 Preparing the CPC3 for the move
- 11.1.1.1 Copying script

The "CPC3\_prepare\_transfer.sh" script must be copied to and run on the "old" CPC3. A file transfer connection, e.g. using WinSCP, must be established in order to transfer the script.

💫 F:\ – root@192.168.5.20 – WinSCP				N			-		×
Lokal Markieren Datei Befehle Ta	bs Einstellur	igen Gegenstelle Hilf	e	<i>V</i> <sup>2</sup>					
🕀 🎦 🔀 Synchronisieren  🖬	P 🔊 🔅	🗿 Liste 👻 Übert	ragungsoptionen Standar	d 🔹 🍠 🗸					
📮 root@192.168.5.20 🗙 📑 Neue	rTab 👻								
- F: USB-Laufwerk • 📁 • 🍸 •	I <b>← •</b> →	- 10 10 10 10	<b>.</b>	/ <root> • 🚰 • 🝸</root>		In in 🔶 🔂	Dateien suc	hen 🛼	
Bearbeiten	× 🖌 🖪	Figenschaften 🔹 🎫	Neu V	Herunterladen 🛪 🕅	Rearbeiten	X 1 B Figenschafte	-n -	» 📭 🗖	
	<u>∧</u> ⊡ u⊻				bearbeiten				
Name	Größe	Тир	Geändert	Name	Größe	Geändert	Rechte	Besitzer	
CPC_prepare_transfer.sh	1 KB	SH-Datei	17.07.2023 13:52:08	<ul> <li>t</li> <li>t</li> <li>boot</li> <li>dev</li> <li>etc</li> <li>home</li> <li>lost+found</li> <li>mnt</li> <li>opt</li> <li>proc</li> <li>root</li> <li>run</li> <li>svv</li> <li>sys</li> <li>tmp</li> <li>var</li> </ul>		10.7.202 11:14:58 10.72.202 11:14:58 10.12.2017 15:18:02 01.01.1970 01:00:00 13.03.2018 18:26:49 10.12.200 01:00:33 13.07.2023 15:53:33 10.12.2017 15:18:02 05.02.2018 05:18:56 05.02.2018 05:18:56 01.01.1970 01:00:00 31.07.2023 10:57:35 31.07.2023 10:57:34 10.12.2017 15:18:02 05.02.2018 05:18:19 01.01.1970 01:00:04 31.07.2023 11:12:27 13.03.2018 18:26:49	INVEL*NE           INVEL*NE*X           INVEL*NE*X	root root root root root root root root	
<			>						
119 B von 119 B in 1 von 1			1 versteckt	0 B von 0 B in 0 von 18			SETP-3	0:09:	53 .

The "CPC3\_prepare\_transfer.sh" script is copied directly into the root directory of the "old" CPC3.

Note: A backup copy of the "wireless" folder should also be produced.

**Warning:** Log files (system, communication & inspection) are not included in the transfer.

Once the script has been copied onto the "old" CPC3, a remote connection with the CPC3 should be established.

#### 11.1.1.2 Running script

Once the remote connection has been established, the Wireless Professional software should be closed and the LXTerminal started.



The 'chmod + x CPC3\_prepare\_transfer.sh' command should be entered in the terminal window and confirmed with Enter.

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Datei Bearbeiten Reiter Hilfe sh-4.4# chmod +x CPC_prepare_transfer.sh
sh-4.4# chmod +x CPC_prepare_transfer.sh

The command has been run when the terminal prompt sh-4.4# appears again.

Then the script must be run by entering the command './ CPC3\_prepare\_transfer.sh' and confirming with Enter



After around 5 seconds, the script will have been run and the "old" CPC3 can be shut down.

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Once the device has been shut down, it can be disconnected from the power supply. The SD card is removed from the device. The SD card is still needed.

### 11.1.2 Transferring data to CPC3

The CPC3 should be started by connecting to the voltage supply. Once the CPC3 has powered up, a remote connection is established with it (see Chapter 0).

In the Start menu, "Other" is selected followed by "MaintenanceMode".

Start menu->Other-> MaintenanceMode

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🕃 🛑 🛅	IIIRP-Technik - <facility></facility>		· · · ·		≜ 🖇 1↓ 🔹	) 13:57
Internet	>	_	RP-Technik - «Facility» (nicht verbunden)			~ ¤ ×
Sonstige	> 🛜 Acces Point entfernen	31010100100100100101000000 <b>0101010</b> 1	DIDIDIDE INCOMPATING INCOMP			- Dautaah
🖓 Zubehör	> 🛜 AP Einstellungen ändern	fossional	GROUP			e Hilfe
Einstellungen	Firewall Einstellungen	pressional U	SOLUTIONS IN SAFETY + LIGHTING			C THIC
Ausführen	O Herunterfahren	1010110106669105650505031010				
	Tehler					Login
	Nach Updates suchen		Anzahl Gruppen		Status	Login
<facility></facility>	55 Neustart		0	🔵 Betriebsbereit		
	Passwortwechsel					
	C RustDesk					
	VNC Passwortwechsel					

Once this has been done, it will take around 15 seconds for the CPC3 to start to perform a restart. The remote connection may be lost during this time.

As soon as the CPC3 has powered up again, the remote connection must be established again.

The CPC3's operating system is now in read-write mode. (see Chapter 7).



The SD card of the "old" CPC3 is now inserted into the USB card reader and this is connected to the CPC3.

As soon as the operating system has recognised the SD card, the "Removable media" window is displayed twice. This is correct because the SD card has 2 partitions.

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The two "Removable media" windows are closed by clicking on the "Cancel" button.



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The "Run file" window is opened. The "Run in the terminal" button in this window should be selected.



Once the button has been clicked on, the "CPC3 copy and upgrade" window opens.



The partition on the SD card containing the root directory of the "old" CPC3 must be selected from the dropdown list of the "Path to old root partition on SD Card" box.

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The first partition is typically 100MB in size and the second 6.9GB. The root directory is in the 6.9GB partition. Select this.

Once the right partition has been selected, the import process is started by clicking on the "copy" button.

As soon as the process is complete, the "-Task Done -" message appears.



Should an error have occurred during the import, "-Error -" appears.

After the import, the "CPC3 copy and upgrade" window is closed by clicking on the "x" in the top right.

Using the taskbar symbol, the file explorer is launched by clicking on the symbol.

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The file explorer is opened and displays the content of the "home" directory. By clicking on the "Eject" symbol behind the two SD card partitions, the SD card is unmounted.



Important: The SD card in the USB card reader may only be disconnected from the CPC3 once the SD card has been unmounted.

Once theunmount process is complete, the two partitions disappear from the file explorer. The USB card reader with SD card can now be disconnected from the CPC3.

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The "ExitMaintenanceMode" desktop connection is then double-clicked on.



The "Run file" window opens. The "Run in the terminal" button is clicked on and the script gets to work.

After clicking on this button, it will take around 20 to 30 seconds before the CPC3 performs a restart triggered by the script.

The CPC3 now powers up in read-only mode. When launching the Wireless Professional software, the data imported from the "old" SD card is used and converted into the current format. Depending on the amount of data involved, this may take some time. Once this is complete, the CPC3 takes on the monitoring function of the associated devices.

**Note:** The coordinator's serial port has to be selected again because it will have a different name on the CPC3 to that on the "old" CPC3.

**Note:** If the coordinator is also to be changed along with the CPC3, once the data has been imported, the coordinator will have to be changed as described in the Wireless

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Professional manual in order to establish the radio connection between the devices and new coordinator.

11.2 Importing data from WLZent/WLTouch

An FAT32 format formatted USB stick is needed to transfer data to the Wireless Professional CPC3.

11.2.1 Preparing the WLZent for the move

The USB stick is inserted into the WLZent. If the Wireless Professional software is active at this time, it must be closed by the user.

The file explorer is opened via the "WLZent" desktop symbol.



The "wireless" folder is selected and copied to the clipboard by going to "Edit->copy", pressing the key combination "Ctrl + c" or by right-clicking and going to "Copy" in the Context menu.

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Trash (Empty)	er WLZe	nt WLZ+ Docum	ent Wirele ents Applicat	ss Onboard	<b>J</b> Textedi	tar					x11 vnc
wizent			-	_	_	_	_	_	_	_ S X	
File Edit View Go			Lange Lorde								
	Ma 🛛 😐		home wiz	ent							
Places *		D.	n	3		55		0	R. 7		
WLZent	backup	Desktop	Documents	Downloads	maps	Music	persist	Pictures	Public	scripts	
Desktop											
Trash											
Computer											
Applications	sdcard	Templates	Videos	wiøless	wldoku	x11vnc.log					
Devices				wireless							
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The inserted USB stick (in this example, the USB stick is called FATSTICK) is then selected by clicking on it.

The "wireless" folder is now copied to the USB stick by going to "Edit->Paste".

Once the copying process is complete, the USB stick is ejected using the symbol behind its name.

Warning: If the USB stick is pulled out without doing this, data may be lost

**Note:** The folder must not be renamed or stored in a sub-folder otherwise the data import will not work.

#### 11.2.2 Preparing the WLTouch for the move

The USB stick is inserted into the WLTouch. If the Wireless Professional software is active at this time, it must be closed by the user.

The file explorer is opened and the c:\ drive selected.

The "WirelessProfessional" folder on this drive is selected and copied to the clipboard by pressing the key combination "Ctrl + C", going to "Edit->copy", or by right-clicking and going to "Copy" in the Context menu.

The USB stick is then selected and the "WirelessProfessional" folder is copied to the USB stick by going to "Edit->copy".

## **Operating Instructions**

Once the copying process is complete, the USB stick is right-clicked on and "Eject" selected. The USB stick can then be removed from the device.

Warning: If the USB stick is pulled out without doing this, data may be lost

**Note:** The folder must not be renamed or stored in a sub-folder otherwise the data import will not work.

11.2.3 Transferring data to CPC3

The CPC3 should be started by connecting to the voltage supply. Once the CPC3 has powered up, a remote connection is established with it (see Chapter 0).

In the Start menu, "Other" is selected followed by "MaintenanceMode".

Start menu->Other-> MaintenanceMode

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Once this has been done, it will take around 15 seconds for the CPC3 to start to perform a restart. The remote connection may be lost during this time.

As soon as the CPC3 has powered up again, the remote connection must be established again.

The CPC3's operating system is now in write mode (see Chapter 7).

**Operating Instructions** 

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The USB stick is now inserted into a free USB port on the CPC3.

As soon as the operating system has recognised the SD card, the "Removable media" window is displayed.



The "Removable media" window is closed by clicking on the "Cancel" button.

The "WLTouchUpgrade" script is used to import data from a WLTouch onto the CPC3. The "WLZentUpgrade" script imports data from a WLZent onto the CPC3. The corresponding script is run by double-clicking on the desktop link.

**Operating Instructions** 

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The description below explains how to perform an import using WLZent data. The steps for importing data from a WLTouch are exactly the same.

## Wireless Professional CPC3 Operating Instructions

The "Run file" window is opened. The "Run in the terminal" button in this window should be selected.



Once the button has been clicked on, the "WLZent copy and upgrade to CPC3" window opens.



The USB stick containing the "wireless" folder should be selected from the dropdown list of the "Path to Wireless Folder on Flash Drive" box.

Once the USB stick has been selected, the import process is started by clicking on the "copy" button.

As soon as the process is complete, the "--- Done -" message is displayed.

## **Operating Instructions**

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Should an error have occurred during the import, "-Error -" is displayed instead.

After the import, the "WLZent copy and upgrade to CPC3" window is closed by clicking on the "x" in the top right.

Using the taskbar symbol, the file explorer is launched by clicking on the symbol.



The file explorer is opened and displays the content of the "home" directory. By clicking on the "Eject" symbol behind the USB stick, the stick is removed (unmounted).

## **Operating Instructions**

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**Important:** The USB stick may only be disconnected from the CPC3 once unmounted.

Once the unmount process is complete, the USB stick disappears from the file explorer. The USB stick can now be disconnected from the CPC3.

The "ExitMaintenanceMode" desktop connection is then double-clicked on.



The "Run file" window opens. The "Run in the terminal" button is clicked on and the script gets to work.

After clicking on this button, it will take around 20 to 30 seconds before the CPC3 performs a restart triggered by the script.

The CPC3 now powers up in read-only mode. When launching the Wireless Professional software, the data imported from the WLZent/WLTouch is used and converted into the current format. Depending on the amount of data involved, this

may take some time. Once this is complete, the CPC3 takes on the monitoring function of the associated devices.

**Note:** The coordinator's serial port has to be selected again because it will have a different name on the CPC3 to that in the previous system.

**Note:** If the coordinator is also to be changed along with the CPC3, once the data has been imported, the coordinator will have to be changed as described in the Wireless Professional manual in order to correctly establish the radio connection between the devices and new coordinator.

#### 12 Changing CPC3 Passwords

The CPC3 passwords issued upon delivery are noted in the accompanying info sheet and in the Info file on the CPC3 desktop.

Note: We would recommend changing the passwords when commissioning the CPC3.

**!Warning:** The CPC3 passwords may only be changed using the methods described here.

The passwords must not be changed via the terminal or in any other way as this may upset the CPC3 operating process. If this is done, the warranty will cease to apply.

Note: Password changes should be adequately documented.

#### 12.1 Changing CPC3 user password

The password for the CPC3 operating system is changed by going to the Start menu and selecting "Other". Start menu->Other-> Password change

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Once "Password change" has been selected, the "User Password Change" window appears.

## **Operating Instructions**

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The "User Password Change" window should be confirmed by clicking on OK.

**Note:** To avoid Wireless Professional software data from being lost, the software should be saved or closed before changing passwords.

The CPC3 performs a restart and changes from read-only mode to read-write mode.



Once the operating system has been booted up in read-write mode, the input screen for changing the user password is displayed.

## **Operating Instructions**

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Box	Meaning
Old password	Current password
New Password	New password
New Password	Confirmation of
	new password

To change the password, the "Apply" button should be clicked on. To abort the process, the window should be closed using the "x" in the top right.

In both cases, the "User Password Change" window closes and the "update1reboot.png" window is displayed.



Around 20 seconds after the "update1reboot.png" window appears, the operating system performs a restart. After the restart, the operating system is again in read-only mode.

The process for changing the password is complete.

12.2 Changing VNC connection password

The CPC3's VNC connection password is changed by going to the Start menu and selecting "Other". Start menu->Other-> VNC password change

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Once VNC password change has been selected, the "Change VNC Password" window is displayed.

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## **Operating Instructions**

**Note:** To avoid Wireless Professional software data from being lost, the software should be saved or closed before changing VNC passwords.

The "Change VNC Password" window should be confirmed by clicking on OK. The CPC3 performs a restart and changes from read-only mode to read-write mode.



Once the operating system has been booted up in read-write mode, the input screen for changing the VNC connection password is displayed.

Box	Meaning
New Password	New password
Repeat new	Confirmation of
password	new password

To change the password, the "Apply" button should be clicked on. To abort the process, the window should be closed using the "x" in the top right.

In both cases, the "VNC Password Exchange" window closes and the "update1reboot.png" window is displayed.

**Operating Instructions** 

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Around 20 seconds after the "update1reboot.png" window appears, the operating system performs a restart. After the restart, the operating system is again in read-only mode.

The process for changing the VNC connection password is complete.

12.3 Changing RustDesk connection password

The RustDesk connection password of the CPC3 cannot be changed.

**Operating Instructions** 

## 13 Access Point Settings

The access point settings can be accessed by going to the Start menu and selecting "Other":

Start menu->Other-> Change AP settings

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Once this has been done, the "Access Point Settings Launch" window is displayed.

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## Wireless Professional CPC3 Operating Instructions

The "Access Point Settings Launch" window should be confirmed by clicking on OK.

**Note:** To avoid Wireless Professional software data from being lost, the software should be saved or closed before accessing the access point settings.

The CPC3 performs a restart and changes from read-only mode to read-write mode.



If the CPC3 is powered up in read-write mode, the web browser is launched automatically and calls up the "localhost" web page.

The user name and password can be found on the info sheet provided they have not already been changed.

**Operating Instructions** 

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The login data should be confirmed by clicking on the "Log in" button after which the browser displays "RaspAP". Settings for the access point can be configured in the "RaspAP".



#### 13.1 Changing SSID

The SSID is the name under which other devices can find the WLAN network broadcast by the CPC3. Upon delivery, every CPC3 has an individual preset SSID.

"Hotspot" in the menu on the left should be clicked on.

**Operating Instructions** 

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A new name for the network can be assigned in the "SSID" box. To save the change, the "Save settings" button should be clicked on. The browser should then be closed using the "x" in the top right.

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Once the browser has been closed, the "update1reboot.png" window appears.

## **Operating Instructions**

The CPC3 automatically performs a restart and switches back into read-only mode. After the restart, the WLAN signal is broadcast with its new name.

13.2 Changing access point connection password and encryption To assign a new connection password, "Hotspot" is clicked on in the menu on the left.

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The "Safety" tab in the hotspot configuration section is clicked on.

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**Operating Instructions** 

A password (network code) can be assigned in the "PSK" box. The password must contain at least 8 characters. The newly assigned password should be documented appropriately.

Tip: The "Magic wand" button to the right of the "PSK" input box creates a random password with the max. number of characters.

WPA and WPA2 encryptions are available for the WLAN access point. We would recommend using the WPA2 standard.



TKIP or CCMP can be selected for the encryption types. We would recommend using the CCMP encryption type.

**Operating Instructions** 

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To save the new password and/or changes to the encryption, the "Save settings" button should be clicked on.

The browser should then be closed using the "x" in the top right.

Once the browser has been closed, the "update1reboot.png" window appears.



The CPC3 automatically performs a restart and switches back into read-only mode. The newly assigned network code now applies.

### 13.3 Changing RaspAP authentication

Every CPC3 has an individual authentication password. To change the authentication (login data) on the "RaspAP", "Authentication" in the menu on the left should be clicked on.

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The authentication page is then displayed.

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## **Operating Instructions**

The RaspAP login name is saved in the "User name" box (presetting: user name "Admin").

The password, which was used to log into this "RaspAP" session, should be entered in the "Old password" box.

The new password is entered in the "New password" box.

The new password must also be entered in the "Repeat new password" box.

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	<ul> <li>Datennutzung</li> <li>System</li> </ul>	Einstellungen speichern		
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To save the details entered, the "Save settings" button should be clicked on.

Note: The user name and password should be documented appropriately.

The browser should then be closed using the "x" in the top right.

Once the browser has been closed, the "update1reboot.png" window appears.

**Operating Instructions** 

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The CPC3 automatically performs a restart and switches back into read-only mode. The new authentication data is needed the next time the user logs into the "RaspAP".

13.4 Deactivating the access point

If the CPC3's access point functionality is not needed, we would recommend deactivating the access point. The access point can be reactivated if necessary.

"Hotspot" in the menu on the left should be clicked on.

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## **Operating Instructions**

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The CPC3 stops operating as an access point when the "Stop hotspot" button is clicked on.

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To make this change permanent, the "Save settings" button must be clicked on. The browser should then be closed using the "x" in the top right.

Once the browser has been closed, the "update1reboot.png" window appears.

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The CPC3 automatically performs a restart and switches back into read-only mode.

13.5 Activating access point

To reactivate the CPC3's deactivated access point functionality, "Hotspot" is selected in the menu on the left.

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The access point is reactivated by clicking on the "Start hotspot" button. During activation, the "Starting hotspot" window appears in the web browser and the status bar fills.

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Once the status bar is full, the settings still have to be saved permanently.

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The "Save settings" button can be seen by scrolling down in the web browser. Once the settings have been saved, the access point is available again.

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The browser should then be closed using the "x" in the top right.

Once the browser has been closed, the "update1reboot.png" window appears.

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The CPC3 automatically performs a restart and switches back into read-only mode.

### 14 WLAN

It is currently not possible to establish an Internet connection via an existing WiFi network with the Wireless Professional CPC3.

#### 15 Bluetooth

The Wireless Professional CPC3 has a Bluetooth interface. It is not recommended using Bluetooth devices on the CPC3.

#### 16 Ethernet

The Wireless Professional CPC3 has an RJ-45 socket. This can be used to connect the device to an Ethernet. Upon delivery, the CPC3 is set such that a DHCP service is required.

The CPC3 can therefore no longer be directly connected to a PC via a patch or crossover cable upon delivery.

#### 16.1 Static IP address

A static IP address can be assigned to the CPC3. Once a remote connection to the CPC3 has been established, "MaintenanceMode" is selected under "Other" in the Start menu.

Start menu->Other-> MaintenanceMode

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Once this has been done, it will take around 15 seconds for the CPC3 to start to perform a restart. The remote connection may be lost during this time.

As soon as the CPC3 has powered up again, the remote connection must be established again.

The CPC3's operating system is now in write mode (see Chapter 7).

Right-click on the symbol in the taskbar which comprises an upwards and downwards arrow.

**Note:** For technical reasons, an external mouse is required to open and operate the context menu.



The "Network Preference" window is then displayed.



The "eth0" interface should be selected to issue a static IP address to the Ethernet adapter.

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Once the interface has been selected, the boxes are completed.



Box name	Meaning
IPv4 Address	4 byte IP address
IPv6 Address	6 byte IP address
Router	IP address of the
	router/gateway
DNS Servers	IP address of the
	domain name
	server
DNS Search	Domain of a name
	server

The IP address is entered as shown in the example; as is the address of the router/gateway and that of a DNS (Domain Name Server). The subnet mask is set to 255.255.255.0 as standard.

A sub-mask suffix can be entered after the IP address if needed.

The checkmark next to "Automatically configure entpy options" must not be set.

The box for the DNS Search can be left empty if a DNS server is stated.

If no IPv6 is assigned, a tick should be placed in the "Disable IPv6" checkbox.

Once the corresponding boxes are completed, the settings are applied by clicking on the "Apply" button. The window can then be closed by clicking on the "Close" button.

Maintenance Mode is exited by double-clicking on the "ExitMaintenanceMode" desktop link.

After double-clicking, the "Run file" window is opened. The "Run in the terminal" button is clicked on and the script gets to work.

After clicking on this button, it will take around 20 to 30 seconds before the CPC3 performs a restart triggered by the script.

The CPC3 now powers up in read-only mode and can be contacted using the static IP address of the Ethernet interface.

#### 17 Firewall

The Wireless Professional CPC3 has a firewall, which blocks incoming and outgoing connections to and from the device provided they are not needed for operation. Changes to the firewall configuration are not recommended and are undertaken at the user's own risk.

#### 18 Operating System and Wireless Professional Updates

The Wireless Professional CPC3 periodically checks for updates to the operating system and the Wireless-Pro software. The CPC3 requires an internet connection for this check. Once a week (Sundays, 0:00 a.m.), the CPC3 automatically checks for updates, downloads and installs them.

This update process does not require any manual intervention. However, it is possible to manually start the search and installation of updates at any time, regardless of the weekly rhythm described above. To do this, click on the command "Check for updates" in the start menu.

**Note:** It may be necessary for your IT administrator to enable access to the update server through the firewall.

**Important:** The operating system itself from time to time indicates that an update is available by means of an icon in the bar at the top of the screen, and allows its installation by clicking on the icon (see image below). However, for technical reasons, any update invoked in this way will be lost when the system performs a reboot. Therefore, updates MUST NOT be carried out via the icon, but ONLY by using the command "Check for updates" in the start menu.

**Note:** Individual operating system updates may not be installed. In this case, the update icon will remain visible or reappear. This is not a malfunction, but intentional behavior. In such a case, the update icon should be ignored.

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**Note:** An offline update of the operating system is not possible, nor is the subsequent installation of software, e.g. via USB stick inserted into the device.

### 19 Copying Building Plans onto the CPC3

Building plans can be copied onto the USB stick on the CPC3.

**!Warning:** The USB stick must not be removed during operation otherwise there is a risk of data loss.

Before the USB stick can be removed, the CPC3 must be shut down.

See Chapter

If the CPC3 has been shut down and disconnected from the power supply, the USB stick can be removed from the CPC3. The USB stick is connected to a PC, where a file explorer is opened in order to view the content of the USB stick.

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Building plans must be stored in the "facility" folder.

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#### 20 CPC3 Documentation

The CPC3 documentation is available at the local path:

/home/rp/Desktop/manual/

Also the maintenance procedure can be found here.

### 21 FAQ

21.1 Can I change the system language?

The Wireless Professional CPC3 can be ordered with German and English system languages (ex factory respectively). The system language cannot be changed at a later date.

Can I adjust a time zone?

No. The CPC3 is currently only envisaged for use in Europe with the time zone for Berlin, Paris, etc... (GMT+2). CPCs with a different time zone setting can be supplied on request for use in a different time zone.

21.2 What is the name of the update server? To compare versions, the CPC3 queries the address

https://www.rp-group.com/upd/cpc/rel/

A new software version is downloaded from the address

https://www.rp-group.com/upd/cpc/app/wlproapp.tar.gz

21.3 Why is the Wireless Professional application always restarted again?

To ensure continuous monitoring of the single-battery emergency luminaires, the Wireless Professional software must be continually active. The CPC3 has what is known as a WatchDog mechanism, which checks every 30 seconds whether the Wireless Professional application is running. If it isn't, the Wireless Professional software is relaunched.