CentronicPLUS

LC120 PLUS

Assembly and Operating Instructions

Flush-mounted radio receiver for lighting systems

Important information for:

・ Fitters / ・ Electricians / ・ Users

Please forward accordingly!

These instructions must be kept safe for future reference.

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Table of contents

General

The radio receiver, delivered ex works, converts radio signals into control signals. A lighting system can be remotely controlled using the radio receiver.
The radio receiver can be controlled with all transmitters in the CentronicPLUS range of control units and various transmitters in the Centronic range (see Compatible Centronic transmitters [▶ 9]).
Please follow these Assembly and Operating Instructions when installing and setting up the device.

Explanation of pictograms

	CAUTION	CAUTION indicates a hazardous situation which, if not avoided, could result in injury.
	ATTENTION	ATTENTION indicates measures that must be taken to avoid damage to property.
		Denotes user tips and other useful information.

Licensing information for open source software

This device uses free/open source software.
The licence texts are enclosed with the product in the licence documentation, which can be identified by the following symbol:

The licence texts for the licensed software being used can be downloaded from www.becker-antriebe.com/licenses.

Written request for the licence texts:
Becker-Antriebe will, on request, provide the licence texts for the licensed software being used at cost price, either on a USB stick or a similar data carrier. Please send an email to the following email address for more information: licenses@becker-antriebe.com

Warranty

Structural modifications and incorrect installation which are not in accordance with these and our other instructions can result in serious injuries, e.g., crushing of limbs. Therefore, structural modifications may only be carried out with our prior approval and strictly in accordance with our instructions, particularly the information contained in these Assembly and Operating Instructions.
Any further processing of the products which does not comply with their intended use is not permitted.
The end product manufacturer and fitter have to ensure that all the relevant current statutory, official and, in particular, EMC regulations are adhered to during utilisation of our products, especially with regard to end product manufacture, installation and customer advice.

Safety instructions

The following safety instructions and warnings are intended to avert hazards and to prevent property damage and personal injury.

General information

- Always comply with the regulations of local energy supply companies as well as the VDE 100 provisions for wet and damp rooms during installation.
- Only use in dry rooms.
- Only use unmodified original parts from the control unit manufacturer.
- Observe all pertinent country-specific regulations.
- Keep children away from control units.

> **Caution**
> - **Risk of injury due to electric shock.**
> - **Connections to the 230 V mains must always be performed by a qualified electrician.**
> - **Disconnect the connecting cable from the power supply prior to assembly.**
> - **When connecting the control cables, only use cables with sufficient electric strength.**

Intended use

The radio receiver described in these instructions must only be used for the operation of lighting systems.

Installing several Centronic / CentronicPLUS devices in the same connection socket is not permitted.

- Please note that radio-controlled systems may not be used in areas with a high risk of interference (e.g. hospitals, airports).
- The remote control is intended solely for use with equipment and systems in which malfunctions in the transmitter or receiver would not pose any risk to persons, animals or property, or which contain safety devices to eliminate such risks.
- The operator is not protected from interference from other telecommunications systems and terminal equipment (e.g. even from radio-controlled systems which are properly operated in the same frequency range).
- Only connect radio receivers to devices and systems approved by the manufacturer.

> - **Ensure that the control unit is not installed or operated close to metal surfaces or magnetic fields.**
> - **Radio-controlled systems transmitting on the same frequency may cause reception interference.**
> - **Note that the range of the radio signal is limited by legislation as well as by design.**

Explanation of displays and buttons
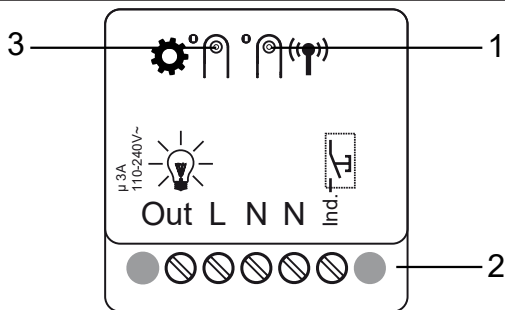
1 Programming button		
2 Connecting terminals		
3 Mode button	Switching actuator (factory setting)	1x
	Impulse (1s)	2x
	Staircase light	3x

Explanation of functions

Output ☼

Connect the lighting system as shown in the wiring diagram.

Individual input

This connecting terminal is intended for an additional pushbutton (normally open contact) or switch.

The lighting system is switched in the following sequence: ON-OFF-ON-OFF.

Wiring

> **Caution**
> - **Risk of injury due to electric shock.**
> - **Connection may only be performed by a qualified electrician!**
> - **The device only offers back-of-hand protection, not touch protection.**
> - **Always take into account the device switching current.**

1. Connect the device as follows:
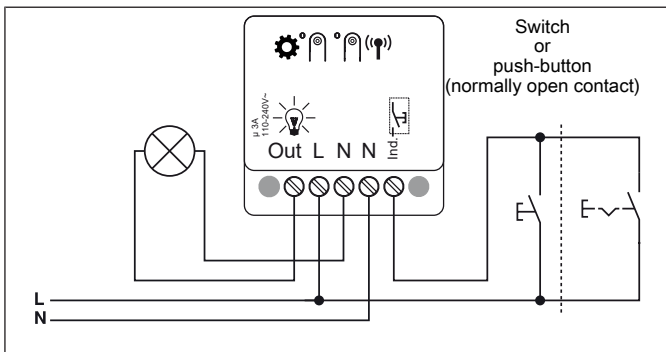
2. When the power is switched on, the device confirms by briefly switching the OUT output.

3. Set the operating mode as described in the chapter Switching between operating modes [▶ 10].

4. Programme a transmitter into the receiver.

Compatible Centronic transmitters

All CentronicPlus receivers can be operated with the Centronic transmitters listed in the Centronic/CentronicPlus compatibility table at

www.becker-antriebe.com/downloads

As two fundamentally different radio technologies are linked in this case, the full performance of the CentronicPlus radio control system is not available in this combination. When using the Centronic transmitter with CentronicPlus receiver, the range performance may be reduced under certain circumstances. A Centronic transmitter cannot process feedback from the CentronicPlus receiver. The full performance of CentronicPlus is only achieved in combination with CentronicPlus transmitters, receivers and sensors, as only then will an intelligent, bidirectional system be automatically created.

Switching between operating modes

The programmed transmitter and installation data are deleted when changing operating mode.

	Briefly pressing the mode button on the radio receiver causes the adjacent LED to flash orange to indicate the current operating mode.
	► LED flashes 1x: Switching actuator
	► LED flashes 2x: Impulse (1s)
	► LED flashes 3x: Staircase light
	Keep the mode button pressed down to switch to the next operating mode. Briefly pressing the mode button again switches to the next operating mode, and so on. Once the required operating mode has been selected, wait a moment until the LED next to the mode button confirms the programming by lighting up green.

Resetting the operating mode

**The staircase light time, programmed transmitter and install-
ation data are deleted when resetting the operating mode.**

Press the mode button until the adjacent LED
starts to flash red and then lights up green. Re-
lease the button as soon as the LED lights up
green.

➤ The operating mode has been reset and the
  radio receiver switches to programming
  mode.

Commissioning with a CentronicPLUS transmitter

Explanation of symbols

Explanation of symbols	
▲	**Up/retract button (ON)**
■	**STOP button (OFF)**
▼	**Down/extend button (ON)**
●	**Programming button (on the transmitter)**
⌂((•))	**Programming button (on the radio receiver)**
✿⌂	**Mode button (on the radio receiver)**
LED ring image	**LED ring on the transmitter (only when using a CentronicPLUS transmitter. No feedback is sent to the transmitter when using a Centronic transmitter)**
☀...X	**Receiver confirms once or multiple times by switching the outputs or by the mode LED illuminating**
Operating modes	
Normal mode	**Control of selected receiver/channel**
Receiver selection	**Selection of the required receiver and channel assignment**
Setting mode	**Commissioning and administration of selected receivers**

Programming the CentronicPLUS transmitter

Caution
- **Risk of injury due to electric shock.**
- **Connection may only be performed by a qualified electrician!**
- **The device only offers back-of-hand protection, not touch protection.**

Establish programming mode

Make sure that the required operating mode is selected.

Putting the radio receiver into programming mode by switching on the power

	1x	Switch on the power.
		▷ The LED next to the programming button flashes green and then flashes yellow after 3 minutes.
		▷ The receiver confirms.
		► The radio receiver remains in programming mode for 15 minutes.

Putting the radio receiver into programming mode with the programming button

3s		Briefly press the programming button on the radio receiver.
		▷ The LED next to the programming button flashes green and then flashes yellow after 3 minutes.
		► The radio receiver remains in programming mode for 15 minutes.

i		With brand new products, devices from another installation or products that have been restored to factory settings, programming mode must be established beforehand (see Establishing programming mode).

☞		Bring the transmitter as close as possible to the receiver to be programmed.
● 3s	🔆 1x	Press the programming button for 3 seconds when it is ready to program. The transmitter performs a search and the LED ring continuously changes colour. The transmitter then switches to receiver selection and selects the receiver with the best connection quality.
		▷ The receiver confirms.
		If you do not receive confirmation from the required receiver, you can press the ▲/▼ button to toggle between the available receivers until the required receiver confirms. Pressing the ▲ button for 3 seconds confirms the receiver with the best connection quality.
		▷ The transmitter displays the current assignment status of the receiver via the LED ring.
Assignment status		
Lights up yellow:		The receiver is not yet part of the installation or is in the **as-delivered condition**.
Lights up blue:		The receiver is **not assigned to the selected channel.**
Lights up green:		The receiver is **assigned to the selected channel.**
Lights up white:		Centronic PLUS sensor selected.
Lights up purple		Centronic PLUS transmitter selected.
Lights up red:		No receiver located.

		Select the desired channel by pressing the function key on the multi-channel hand-held transmitter.
	1x or 2x 	Press the STOP button to change the assignment status of the selected receiver. If the receiver is not yet part of the installation, it will be added and assigned to the selected channel. ▷ The receiver signals once to confirm the channel assignment, or signals twice to cancel the channel assignment. ▷ The transmitter lights up accordingly to confirm the new assignment status. ► The receiver is now part of the installation with the required channel assignment.
3s		Then press the programming button for 3 seconds to change to normal mode. ► The LED ring goes out.

Selection of the receiver for the setting mode

🖚		Bring the transmitter as close as possible to the required receiver.
●**3s**	☀ 1x ⬆□⬇	Press the programming button for 3 seconds. The transmitter performs a search and the LED ring continuously changes colour. The transmitter then switches to receiver selection and selects the receiver with the best connection quality. ▷ The receiver confirms. If you do not receive confirmation from the required receiver, you can press the ▲/▼ button to toggle between the available receivers until the required receiver confirms. Pressing the ▲ button for 3 seconds confirms the receiver with the best connection quality. ▷ The transmitter displays the current assignment status of the receiver via the LED ring.
Assignment status		
Lights up yellow:		The receiver is not yet part of the installation or is in the **as-delivered condition**.
Lights up blue:		The receiver is **not assigned to the selected channel.**
Lights up green:		The receiver is **assigned to the selected channel.**
Lights up white:		Centronic PLUS sensor selected.
Lights up purple		Centronic PLUS transmitter selected.
Lights up red:		No receiver located.

●	☀ 1x	Briefly press the programming button to change to the setting mode.
	△ □ ▽	▷ The receiver confirms.

▷ The LED ring of the transmitter slowly pulses light blue.

➤ The setting mode is now active.

ℹ If a receiver has not yet been added to the installation (LED ring lights up yellow), it will not be possible to select it in this way. The receiver must be added to the installation beforehand. See chapter "Programming CentronicPLUS transmitters". |

Adding additional transmitters to the installation

● **i**		If installation data already exists for the transmitter being programmed, the procedure will be terminated. Termination is indicated by the red flashing of the LED ring. In this case, the transmitter will need to be restored to factory settings (see corresponding transmitter instructions).

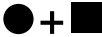|		
●**3s**	☀ 1x ⬚	Press the programming button on an already programmed transmitter for 3 seconds. The transmitter performs a search and the LED ring continuously changes colour. The transmitter then switches to receiver selection and selects the receiver with the best connection quality. ▷ The receiver confirms.
●	⬚	Now press and hold the programming button for a new transmitter. ▷ After 5 seconds, the LED rings on both transmitters start to fill in green. Continue pressing and holding the programming button. ▷ Once the new transmitter has been added successfully, both transmitters flash green to confirm. ► The transmitter has been added successfully. **i The programming process can be terminated at any time by pressing the STOP button on the transmitter that has already been programmed or by releasing the programming button.**

Setting the staircase light time

The staircase light operating mode must be set. A time of between 1 second and 10 minutes can be set as the staircase light time.

🖝		Select the required receiver as described in the chapter Selection of the receiver for the setting mode [▶ 16].
●+▲ 3s	1x	First press the programming button and, within 1 second, press the ▲ button at the same time and hold both buttons down for 3 seconds. ▷ The receiver confirms. ▷ The transmitter confirms by lighting up the upper third of the LED ring.
🕐		Wait until the desired setting time is reached.
■	1x	Now briefly press the STOP button. ▷ The receiver confirms. ▷ The transmitter confirms with blue pulsing of the LED ring. ▷ The transmitter doesn't confirm in setting mode. ► The staircase light is set.

Restoring the factory-set staircase light time (3 min.)

👉		Select the required receiver as described in the chapter Selection of the receiver for the setting mode [▶ 16].
● + ■ **10s**	🔅 2x △ □ ▽	First press the programming button and, within 1 second, press the STOP button at the same time and hold both buttons down for 10 seconds. ▻ The receiver confirms. ▻ The transmitter confirms with red pulsing of the LED ring. ► The staircase light time is now reset to 3 minutes.
● **3s**	△ □ ▽	Then press the programming button for 3 seconds to change to normal mode. ► The LED ring goes out.

Commissioning with a Centronic transmitter

Explanation of symbols

Explanation of symbols	
▲	Up/retract button (ON)
■	STOP button (OFF)
▼	Down/extend button (ON)
●	Programming button (on the transmitter)
⌐◉⌐ ((•))	Programming button (on the radio receiver)
✿ ⌐◉⌐	Mode button (on the radio receiver)
⌐💡⌐ ...X	Receiver confirms once or multiple times by switching the outputs or by the mode LED illuminating

Programming the Centronic transmitter

Caution
- **Risk of injury due to electric shock.**
- **Connection may only be performed by a qualified electrician!**
- **The device only offers back-of-hand protection, not touch protection.**

Putting the radio receiver into programming mode

Putting the radio receiver into programming mode by switching on the power

🔌	🔆 1x	Switch on the power.
		▷ The LED next to the programming button flashes green.
		▷ The receiver confirms.
		► The radio receiver remains in programming mode for 3 minutes.

Putting the radio receiver into programming mode with the programming button

📡		Briefly press the programming button on the radio receiver.
		▷ The LED next to the programming button flashes green.
		► The radio receiver remains in programming mode for 3 minutes.

Programming the master transmitter

> **ℹ** **Master transmitter means the first transmitter programmed in a receiver. In contrast to subsequently programmed transmitters, the master transmitter enables, among other things, the setting of the travel path and the programming or deleting of further transmitters. Any transmitter that has separate UP, STOP, DOWN buttons and a programming button can be a master transmitter.**
> **If a master transmitter has already been programmed in the receiver, press the programming button on the new master transmitter for 10 seconds to delete the programmed master transmitter. Alternatively, use the already programmed master transmitter.**

●3s	☀ 2x	Press the programming button of the transmitter for 3 seconds whilst in programming mode. ▷ The receiver confirms. ► Programming is now complete.

Programming additional transmitters

● **i**	**In addition to the master transmitter, up to 15 further transmitters (of which a maximum of three can be sensors) can be programmed in the radio receiver.**

●3s	☀ 1x	Press the programmed master transmitter's programming button for 3 seconds. ▷ The receiver confirms.
●3s	☀ 1x	Now press the programming button of a new transmitter which has not yet been programmed in the radio receiver for 3 seconds. Doing this activates the programming mode of the radio receiver for a new transmitter for 3 minutes. ▷ The receiver confirms.
●3s	☀ 2x	Now re-press the programming button of the new transmitter you wish to program for 3 seconds. ▷ The receiver confirms. ► The new transmitter has now been programmed.

Deleting transmitters

Deleting individual transmitters

> **i**   **The programmed master transmitter cannot be deleted. It can only be overwritten (see** Overwriting the master [▸ 25]**).**

● **3s**	☀ 1x	Press the programming button on the master transmitter for 3 seconds. ▷ The receiver confirms.
● **3s**	☀ 1x	Now press the programming button of the transmitter to be deleted for 3 seconds. ▷ The receiver confirms.

● **10s**	☀ 2x	Then re-press the programming button of the transmitter to be deleted for 10 seconds.
		
		   ▷ The receiver confirms.
		
		  ► The transmitter is now deleted from the receiver.

Deleting all transmitters (except the master transmitter)

●**3s**	☀ 1x	Press the programming button on the master transmitter for 3 seconds. ▷ The receiver confirms.
●**3s**	☀ 1x	Re-press the programming button on the master transmitter for 3 seconds. ▷ The receiver confirms.
●**10s**	☀ 2x	Re-press the programming button on the master transmitter for 10 seconds. ▷ The receiver confirms. ► All transmitters (except the master transmitter) are now deleted from the receiver.

Overwriting the master

There are two ways to overwrite the master:

- Putting the radio receiver into programming mode by switching on the power
- Putting the radio receiver into programming mode with the programming button on the radio receiver

Putting the radio receiver into programming mode by switching on the power

> **ⓘ** **To ensure that the new master transmitter is programmed in the desired radio receiver only, all other radio receivers that are connected to the same power supply must be deactivated from the programming mode. To do this, after switching the power back on, execute a ▲, ▼ or stop command using the transmitter for this radio receiver, or press the programming button on the radio receiver.**

🔌⬇		Switch off the power supply to the radio receiver.
🔌⬆	☀ 1x	Switch the power supply to the radio receiver back on after 10 seconds.
		▷ The receiver confirms.
		▷ The receiver goes into the programming mode for 3 minutes.
⬤ 10s	☀ 2x	Now press the programming button of the new master transmitter for 10 seconds.
		▷ The receiver confirms.
		► The new master transmitter has now been programmed and the old master transmitter overwritten.

Putting the radio receiver into programming mode with the programming button on the radio receiver

📻((•))		Briefly press the programming button on the radio receiver.
		▷ The tubular drive is ready to program for 3 minutes.
⬤ 10s	☀ 2x	Now press the programming button of the new master transmitter for 10 seconds.
		▷ The receiver confirms.
		► The new master transmitter has now been programmed and the old master transmitter overwritten.

Setting the staircase light time

> **The staircase light operating mode must be set. A time of between 1 second and 10 minutes can be set as the staircase light time.**

● + ▲ 3s	☼ 1x	First press the programming button and, within 1 second, press the ▲ button at the same time and hold both buttons down for 3 seconds. ▷ The receiver confirms.
⊕		Wait until the desired setting time is reached.
■	☼ 1x	Now briefly press the STOP button. ▷ The receiver confirms. ► The staircase light is set.

Restoring the factory-set staircase light time (3 min.)

● + ■ 10s	☼ 2x	First press the programming button and, within 1 second, press the STOP button at the same time and hold both buttons down for 10 seconds. ▷ The receiver confirms. ► The staircase light time is now reset to 3 minutes.

Additional functions with CentronicPLUS / Centronic

Programming the switching times

> **ℹ** **This function is available with all CentronicPlus EasyControl transmitters and with Centronic devices only if equipped with "MemoControl" transmitters from the Becker range of control units.**

This receiver can save a switching time for one ▲ (On) and one ▼ (Off) time. The switching time saved in this way is executed automatically every 24 hours when the Memo function is active. Previously programmed switching times are overwritten, irrespective of which transmitter the programming was carried out from.

🕐	Wait until the time at which you want the automatic switching command to be carried out.
▲ 6s (ON) ▼ 6s (OFF)	At the desired time, press the corresponding button and keep it held down until the receiver confirms after approx. 6 seconds. You can now release the button. ► The receiver has saved the current time for this switching command.

Deleting the switching times with a CentronicPLUS transmitter

| | | When deleting, both switching times are always deleted. |

		Press the STOP button for 10 seconds.
10s	2x	▷ The receiver confirms.
		▷ The transmitter confirms with red pulsing of the LED ring.
		► The switching times are now deleted.

Deleting the switching times with a Centronic transmitter

| | | When deleting, both switching times are always deleted. |

		Press the STOP button for 10 seconds.
10s	2x	▷ The receiver confirms.
		► The switching times are now deleted.

Activating / deactivating the switching times with a CentronicPLUS transmitter

	The run times are activated and deactivated via the manual / automatic changeover at the transmitter.

■ 3s	Press the STOP button for 3 seconds to display the current status.	
	Automatic mode:	The LED ring lights up **green**.
	Manual mode:	The LED ring lights up **red**.
	Different modes:	The LED ring lights up **yellow**.
■ 5s	You can toggle between manual and automatic mode by pressing the STOP button for 5 seconds.	

Activating / deactivating the switching times with a Centronic transmitter

	This function is only available with MemoControl transmitters from the Becker Centronic range of control units.

The Memo function is activated and deactivated via the slide switch. The last changeover to be performed is valid.

In the "🕐" operating mode, this movement is repeated every 24 hours.

In the slide switch position "🖑", no automatic switching commands will be executed.

Restoring the factory settings for the radio programming

| | When resetting the radio programming, all programmed transmitters and installation data for CentronicPLUS, Centronic and the sensors will be deleted. Settings required for the particular operating mode will remain in place. |

◉ (ᵗᵖ)	Press the programming button until the adjacent LED starts to flash red and then lights up green. Release the button as soon as the LED lights up green.
	► The radio programming has been reset and the radio receiver switches to programming mode.

Disposal

The crossed-out bin symbol on the product indicates that the device is subject to mandatory disposal separate from household waste. This product must be handed over to a collection point for electrical and electronic equipment at the end of its service life.

The packaging material must be disposed of properly.

Technical data

Rated voltage	110-240 V AC/50-60 Hz
Switching current	µ 3A/110-240 V AC
Degree of protection	IP 20
Class of protection (dependent on correct assembly)	II
Permissible ambient temperature	-25 to +50˚C
Light running time	Unlimited
Impulse running time	1s
Staircase light running time	1s to 10 mins (factory setting: 3 min.)
Type of mounting	Device socket as per DIN EN 49073 / DIN EN 60670 surface mounted in appropriate surface mounted housing
Max. cable cross-section	1.5 mm²
Maximum emitted transmission power	⩽ 25 mW
Radio frequency	868.3 MHz
Dimensions (W x H x D)	44 x 41 x 20 mm

The maximum transmitter range on and in the building is up to 25 m, and up to 350 m in the open.

What to do if…?

Problem	Remedy
Receiver is not responding.	Insert a new battery/batteries into the hand-held transmitter.
	Make sure the battery/batteries is/are correctly inserted in the hand-held transmitter.
	Reduce distance from receiver.
	Program transmitter.
	Check the receiver.
LED ring flashes yellow or red 4 times.	Insert new batteries into the transmitter.
The LED ring on the hand-held transmitter lights up red when the receiver for the setting mode is selected.	Reduce distance from receiver.
	Check electr. connection of the receiver.
	Put the receiver into programming mode.
	Add the transmitter to the installation.
Required receiver is not responding.	Program transmitter.
	Select the correct channel on the transmitter.
	Check connection.
	Check the external pushbutton connection.
Receiver does not switch at the set switching time.	Switch from Manual to Auto.
	If the slide switch of a Centronic transmitter is already at $\oplus$, switch it to $\text{\^{}}$ then back to $\oplus$.

Problem	Remedy
Set switching times change.	Frequent 230 V AC power cuts.
	Fluctuations in the 50 Hz mains frequency.
	Use a "TimeControl" transmitter and adjust the desired switching time there.
The required setting cannot be changed.	Make sure that the CentronicPlus transmitter is in setting mode, if necessary.

Simplified EU declaration of conformity

Becker-Antriebe GmbH hereby declares that this radio control system complies with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following web address:
www.becker-antriebe.com/ce

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Subject to technical changes without notice.