

Operating instructions

Bedienungsanleitung

Mode d'emploi

# *minipuls C200*

# Operating instructions


# brncolor Minipuls C200

## Before use

We are pleased you have chosen a broncolor Minipuls C200 which is a high-quality product in every respect. If used properly, it will render you many years of good service. Please read all the information contained in these operating instructions carefully. They contain important details on the use, safety and maintenance of the appliance. Keep these operating instructions in a safe place and pass them on to further users if necessary. Observe the safety instructions

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# Important safety instructions



broncolor flash light systems should exclusively be utilised for professional flash light systems by qualified personnel. Before starting up your flash light equipment read carefully all the information in your operating instruction. The safety instructions in the operating instructions must be strictly followed!

- Read and understand all instructions before using!
- Remove the transport protection and the packing material
- Close supervision is necessary when any appliance is used near children. Do not leave the flash light appliance unattended while in use!
- Flash light contains, similar to sunlight, a specific portion of UV radiation! The undesirable side effects on skin and eyes are considerably reduced by using flash tubes or protecting glasses with UV safety measures! Nevertheless, taking pictures at close distances with unprotected skin and eyes should be avoided! Also avoid eye contact with the light source! The maximum daily UV radiation according to IEC 60335-2-27 / DIN 5031-10 is:  $50 \text{ J/m}^2$ . This value should not be exceeded!
- With due allowance for heat radiation, the distance between the monolight and a person or between the monolight and inflammable respectively heat sensitive surfaces should be at a minimum distance of 1 m!
- Prior to replacing flash tubes, halogen lamps, protecting glasses or fuses, disconnect the monolight and the lamp from the power supply! Prior to replacing the halogen lamp or the flash tube, the monolight should cool down for 10 min.!
- broncolor flash light systems should only be equipped with original broncolor flash tubes, original broncolor combustible and packing material, original broncolor accessories, and also original broncolor spare parts!
- broncolor flash light systems, lamps and accessories meet an extremely high safety standard! When connecting broncolor units to accessories of other brands, integrated safety measures may become ineffective! Due to different design features and contact assignment of the products of other brands, the user himself/herself may even be at risk. We offer no guarantee and accept no liability for damages which may be caused by this type of usage!
- To avoid the risk of fire, electric shock or injury to persons utilise exclusively the accessory recommended by the manufacturer!
- Check that the mains voltage corresponds to the information on the type plate of the unit!
- The flash light equipment is designed for use in dry conditions and in an ambient temperature from  $0^{\circ}\text{C}$  to  $35^{\circ}\text{C}$ ! The flash light equipment has to be

protected from wetness, condensation, from dripping and splash water, humidity, dirt, sand, metal chips and exposure to dust!

- **Protect the flash light equipment from electromagnetic fields, shock and vibration!**
- **Protect the flash light equipment from heat and frost! If the monolight freezes continuous loss of power output and serious technical damage can result!**
- **Sudden temperature differences can cause condensation water in the unit! In such situations the equipment must stay for 1 hour in a well ventilated place to acclimatise to the new temperature before startup!**
- **Do not operate the units in an environment where there is a risk of explosion!**
- **The monolight should not be operated in or near water! Attention: high voltage!**
- **The monolight and the lamps should not be immersed in water or other liquids! It could cause an electric shock!**
- **Remove the transport protection cap on the front side of the monolight before connecting it!**
- **For safety reasons, never operate the monolight without the protecting glass in place! UV-coated protecting glasses or UV-coated flash tubes must be utilised as a protection against UV radiation for eyes and skin!**
- **Before operation the monolight has to be fastened on a stand or a suspension device! The monolight must be locked by tightening the mounting screw!**
- **Only sand-filled fuses of the type indicated on the safety type plate may be used with this monolight, as a protection for the halogen lamp! Sand-filled fuses can be identified by their opaque fuse body! With incorrect fuse protection the halogen lamp may burst!**
- **Filters or diffusors should not be fastened directly on the flash tube, halogen modelling lamp or protecting glass!**
- **Do not operate appliance with a damaged earthed cable. Cables which are damaged or twisted must be replaced!**
- **The unit must only be connected to an earthed socket, or an emergency power generator and an earthed extension cable!**
- **If an extension cable is necessary, a cable with a current rating at least equal to that of the appliance should be used. Cables rated for less amperage than the appliance may overheat. When using a cable reel, it must be completely unrolled before use to prevent overheating of the cable!**
- **The unit is suitable for operation with a motor generator provided that the voltage lies within all the load conditions (including capacitive load) and within the tolerance limit of 200-264 V respectively 95-135 V!  
From experience this means that only electronic stabilised motor generators are to be utilised! When operating on unstabilised motor generators, voltage peaks of 300 V and more have been observed! This can lead to damages for which we assume no liability!**

- **Do not operate the lamps inside a bag or a box!**
- **The ventilation slots on the unit or on the lamp should not be covered!**
- **Pay attention when laying, clearing away or rolling up cables that they do not contact hot surfaces or parts of lamps and that they will not be tripped over by persons!**
- **Do not touch the connection socket for mains cable and lamp outlets on the monolight and do not poke in it with metal objects!**
- **Flash tubes, modelling light, halogen lamps and protecting glasses heat up to a high operating temperature, this also applies to the front side of the monolight! Therefore the attachments also assume high temperatures! Handle with care! Contact with hot components can cause injuries!**
- **Do not come into contact with glass or metal whilst operating the flash light system!**
- **Let the unit cool completely after use and before packing!**
- **Always unplug appliance from electrical socket before cleaning and servicing and when not in use! Never jerk cable to pull the plug from the socket. Grasp plug and pull to disconnect!**
- **Dropped or damaged units or lamps must be checked by a specialist before reconnection!**
- **To reduce the risk of electric shock, do not open this appliance, but take it to a qualified service person when service or repair work is required. Incorrect reassembly can cause electric shock when the appliance is used subsequently!**

**Shipping instructions Minipuls C200:**

**Use original broncolor packing for the transport of the monolight! Before shipping flash tubes, halogen lamp and protection glass pack them with our protective pack material (foam plastic and transport cap). If the protective packaging material is incomplete, remove flash tube, halogen lamp and protection glass from the monolight and send them separately!**

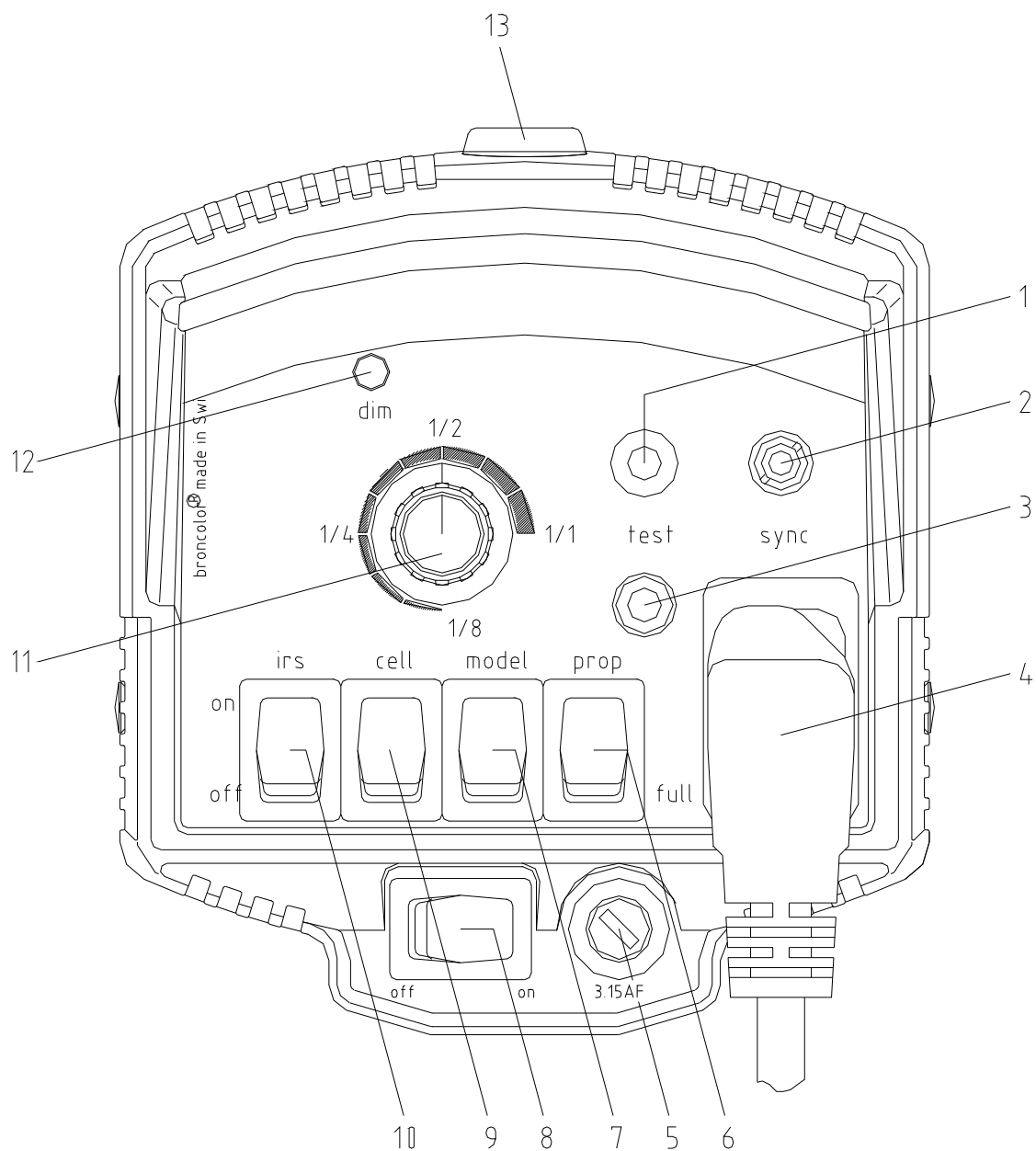
# Controls and displays

## Monolight Minipuls C200

art. no. 31.449.XX

1. Flash release key
2. Jack for synchronous cable
3. Flash ready control lamp
4. Connection socket for mains cable
5. Fuse
6. Switch for modelling light (proportional/full)
7. Switch for modelling light (on/off)
8. Main switch (on/off)
9. Slave cell (on/off)
10. Infrared receiver (on/off)
11. Rotary switch for power control
12. Switch for dim function (flash release control)
13. Reflector release

# Front panel for Minipuls C200



# 1. Application Minipuls C200

This mains supplied studio flash is designed for professional photography. For your own safety, use a three-wire extension cable when required.

## 2. Start up

### 2.1 Mains voltage

The monolight Minipuls C200 is optimised for mains voltage and is not switchable. Nevertheless the 200-240 V version can be operated on a mains voltage of 120 V / 60 Hz with the following restrictions:

- a) a modelling lamp 120 V / 150 W must be used
- b) the charging time increases to 6.9 s

**Attention:** Please note, the voltage of the modelling lamp must correspond with the local mains voltage.

### 2.2 Earthed mains (AC-line)

Connect unit to current supply always using an earthed mains plug.

### 2.3 Start up

Flash tubes, modelling light halogen lamps and protecting glasses heat up to a high operating temperature, this also applies to the front side of the monolight! Therefore the attachments also assume high temperatures! Handle with care! Contact with hot components can cause injuries! For this reason, we recommend to touch the unit only on the handle at the rear or on the stand adapter. The distance between the monolight and a person or between the monolight and inflammable respectively heat sensitive surfaces should be at a minimum distance of 1 m!

- 1.) Remove the transparent plastic protection cap by rotating it, and simultaneously actuating the release device. The desired lightshaper may then be mounted and rotated in any direction.
- 2.) Please check that the mains supply corresponds to the information on the label of the unit. Connect unit to earthed power supply.
- 3.) Switch on the main switch (8) and modelling light (7).
- 4.) The modelling light can be switched off or on during charging (dim function) by pushing in switch (12) with a small screwdriver. This option allows the photographer to confirm visually that all the Minipuls C200 units have fired.
- 5.) Set desired flash output with control knob (11).



- 6.) Green control lamp (3) will illuminate: this is how the unit shows that it is ready
- 7.) Release test flash by pressing key (1).
- 8.) Switch photocell (9) or infrared receiver (10) on or off.
- 9.) If needed, plug in synchronous cable (2).

## 3. Flash tube

The flash tube 1500 J for Miniplus C200 (art. no. 34.310.00) is not UV coated). To ensure an optimal colour temperature, this monolight must be used with a UV-coated protecting glass. For your safety, only original broncolor flash tubes must be utilised. For safety reasons, never operate a unit without a protecting glass in place.

### 3.1 Replacing the flash tube

**Attention:** Prior to each exchange of the flash tube, the monolight must be fired down and immediately afterwards disconnected from the mains! Before exchanging the flash tube, let the monolight discharge and cool down for 10 min.!

The flash tube is pluggable.

- 1.) To exchange the flash tube, carefully pull off the protecting glass. Pull straight, without tilting.
- 2.) Then press the spring radially inward and pull the flash tube axially out of the locking device (do not touch the flash tube with bare hands).
- 3.) Insert the new flash tube. Then press the spring radially inward and make sure that the flash tube is fully pushed in. The spring acts as electrical contact and also prevents the tube from falling out.
- 4.) Replace the protecting glass. When mounting the protecting glass, make sure that the retaining spring of the protecting glass holder of the Minipuls C200 does not coincide with the notches of the protecting glass edge
- 5.) Connect the unit to the power supply, now it is ready for use again.

## 4. Protecting glass

To ensure an optimal colour temperature, this monolight must be used with a UV-coated protecting glass. For your safety, only original broncolor flash tubes must be utilised. For safety reasons, never operate a unit without protecting glass in place.

## 5. Modelling light

### 5.1 General

The unit is equipped with a very bright halogen modelling light. The maximum tolerated modelling light output is:

650 W 220 - 240 V, 300 W 110 - 120 V

**Attention:** Please note, the voltage of the modelling lamp must correspond with the local mains voltage.

### 5.2 Replacing halogen lamps

**Attention:** Prior to each exchange of the halogen lamp, the monolight must be fired down and immediately afterwards disconnected from the mains! Before exchanging the flash tube, let the monolight discharge and cool down for 10 min.!

The halogen lamp is plug-in.

To exchange the halogen lamp, carefully pull off the protecting glass. Pull straight, without tilting. Taking the service life into consideration, the halogen lamp should not be handled with bare hands. To change the lamp, pull it also axially out of the locking device.

When inserting, ensure that the halogen lamp is fully pushed back in. When mounting the protecting glass make sure that the retaining spring of the Minipuls C200 does not coincide with the notches of the protecting glass edge.

## 6. Fuse

The fuse (5) is located on the rear of the unit. Sand-filled fuses with a value 3.15 AF may only be used (sand-filled fuses can be identified by their opaque fuse container). Using an incorrect fuse is dangerous: it may cause the halogen lamp to burst. The correct fuse is therefore included with each original broncolor replacement lamp.

## 7. Heating / temperature monitor

In the proximity of the halogen lamp, the unit, depending on adapters used, can acquire high temperatures. For this reason, we recommend touching the unit on the handle behind or on the stand adapter only. Due to the intense heat radiation when a modelling light is in operation, keep the unit at a minimum distance of 1 m from flammable surfaces.

The unit contains a temperature sensor which protects the electronic circuitry from overload during long flash sequences. If the safety system is activated, the modelling light goes out and charging is blocked. The ready indicator light changes to red until the unit has cooled off. The fan will continue to operate to promote faster cooling.

## 8. Afterglow block

The unit is equipped with an automatic afterglow block. If the flash tube begins to exhibit afterglow (at the end of its service life, for example), this block stops further charging to prevent any additional damage. The ready indicator light also glows continuously red to indicate this condition. To cancel the block, switch the unit off and then on again.

## 9. Mounting

The stand adapter is located below the housing. The adapter will accept standard broncolor<sup>®</sup> bolts and Manfrotto<sup>®</sup> pins. Make sure the lamp is firmly attached to the stand before operating. The click-stops of the locking handle can be adjusted by pulling it out.

The enclosed locking pin has to be screwed into the lower part of the stand adapter so it can be hung from a broncolor<sup>®</sup> bolt; this is not required for stand mounting.

**Attention:** A safety cable must be installed whenever the lamp is suspended.

## 10. Umbrella bracket

The umbrella reflector (art. no. 33.496.00) is used in conjunction with umbrella diffusers and reflectors. The umbrella handle is inserted into the special holder in the stand adapter.

# 11. Flash release

The release is possible via sync cable, infrared, photocell or with manual trigger button.

The units are fitted with a synchronous circuit with low working voltage to protect the camera contact. This synchronous contact may not be switched parallel with outside brands since the latter work with high synchronous voltage.

The infrared receiver integrated in the unit is used for a wireless release by the following units

- Infrared transmitter IRX 2
- Lightmeter and contrast photometer FCM2

When releasing via the photocell or IR receiver, make sure that the receiver cell of the unit is not blocked by obstacles.

## 11.1 Sync sockets

The synchronous cable, art. no. 34.111.00, resp. 34.112.00 may be plugged into the sync sockets (2) to release flashes via cable.

## 11.2 "Test" key

This "test" key (1) allows manual release of the Minipuls C200.

# 12. Accessories

The Pulso bayonet system allows you to use the full line of broncolor reflectors. For a complete summary, please consult the broncolor system catalogue, "Be Creative with Light. And with System".

# 13. Service and repair

Your broncolor compact unit is a precision device which will work for many years without malfunctions if you take proper care of it. If malfunctions do arise, please do not attempt to open the unit to repair it yourself. Even when the unit is shut off, dangerous voltages may remain within the interior of the device. Leave service and repairs to our broncolor repair service.

## 14. Technical data

	<b>Minipuls C200</b>
Flash energy	1500 J
F-stop at distance of 2 m, 100 ISO, reflector P70	64
Flash duration      t 0.1 t 0.5	1/250 s 1/1000 s
Charging time (for 100 % of selected energy)	0.6 - 2.4 s
Ready display	visual
Control range	4 f-stops
Modelling light	halogen max. 650 W (off, prop, dim, full)
Flash release	wireless via infrared transmitter IRX 2, FCM2 photocell, sync cable, manual release button
Reflector mounting	Pulso bayonet
Stabilized flash voltage	+/- 1 %
Power requirements	220-240 V, 50 Hz, 10 A or 110-120 V, 60 Hz, 16 A
Interference suppressor	SEV, VDE
Dimensions	120 x 195 x 495 mm 4.7 x 7.7 x 19.5 in.
Weight	4,5 kg / 9.9 lbs

Subject to change in the interest of technical development.

## 15. Order numbers for diverse spare parts / accessories

flash tube 5900 K for Minipuls C200	art. no. 34.310.00
halogen modelling light 650 W / 240 V	art. no. 34.226.XX
halogen modelling light 300 W / 120 V	art. no. 34.225.XX
protecting glass, clear 5500 K	art. no. 34.336.00
protecting glass, mat 5500 K	art. no. 34.337.00
fuse 3.15 AF	art. no. 37137.00
transport protection cap, transparent	art. no. Z6750.00
mains cable CH 200-240 V	art. no. 39084.00
mains cable USA 100-120 V	art. no. 39085.00
mains cable Europe 200-240 V	art. no. 39086.00
bracket for suspended mounting	art. no. 35228.00

## 16. Guarantee

All **brncolor** power packs, lamps, monolights and accessories have a high quality standard. We offer a 2-year factory guarantee from the date of purchase (for the first owner) on the aforementioned units, except for flash tubes, halogen lamps, protecting glasses, cable, batteries, rechargeable batteries and textiles.

Faults resulting from non-observance of safety instructions, incorrect handling, use of accessories of another manufacturer or unauthorised intervention/modification are excluded from the factory guarantee. We assume no liability for damages resulting from non-observance of the safety instructions, incorrect handling, use of accessories of another manufacturer or unauthorised intervention/modification.

In case of technical problems please contact immediately the nearest authorised **brncolor** service station.

November 2008

Article numbers, product descriptions and scope of delivery can vary from one country to another. Detailed information are available from your responsible brncolor distributor. Errors and misprints excepted.

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DECLARATION OF CONFORMITY  
DECLARATION DE CONFORMITE**

Wir / We / Nous :

**Bron Elektronik AG, Hagmattstrasse 7, CH-4123 Allschwil, Schweiz**

erklären in alleiniger Verantwortung, dass das Produkt  
declare under our sole responsibility that the product  
*déclarons sous notre seule responsabilité que le produit*

**broncolor Minipuls C40, broncolor Minipuls C80, broncolor Minipuls C200**

auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder  
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to which this declaration relates is in conformity with the following standard(s) or  
other normative document(s):  
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document(s) normatif(s):*

**VDE 0882**

**EN 55011**

**IEC 491**

**VDE 733.1/1-85**

**EN 60598**

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following the provision of the Directives:  
*conformément aux dispositions des Directives:*

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Ort und Datum der Ausfertigung:

Place and date of issue:

*Lieu et date:*

**Allschwil, 09.08.2006**

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Name and signature of authorised person:

*Nom et signature du signataire autorisé:*

  
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THE LIGHT