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broncolor
The Light

Bedienungsanleitung
Operating Instructions
Mode d'emploi
Istruzioni per l'uso
Manual de Instrucciones
Gebruiksaanwijzing

broncolor *minipuls*

broncolor *impact* S

Operating instructions

broncolor

Minipuls / Impact S

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Attention: Read before startup

- Prior to replacing the fuse, light bulb or flash tube, discharge the unit and disconnect from power.

- Only those types of fuses indicated on the fuse label may be used. This is particularly important for fusing the halogen lamp which may burst if the wrong fuse is used.

- Only sand-filled fuses may be used. Sand-filled fuses can be identified by the opaque body of the fuse.

- The devices are designed for use in dry rooms. Protect them against splash water and against excessive exposure to dust.

- The devices are not suitable for use in an environment with risks of explosions.

- The accessories mounted to the unit may heat up to high temperatures under specific conditions. Handle with care!

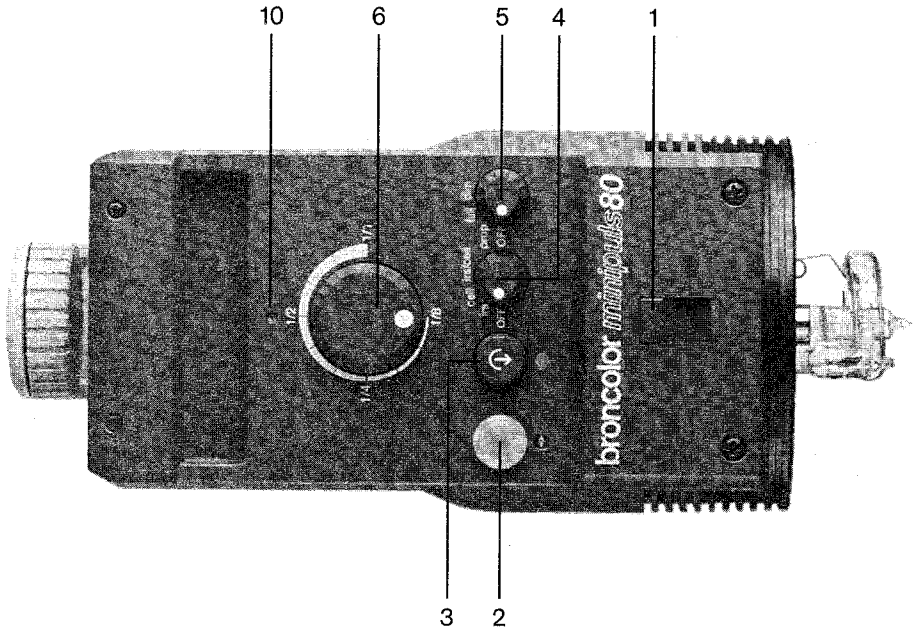
- With due allowance for heat radiation, units with more than 100 W modelling light may be directed against inflammable surfaces only at a minimum distance of 1 meter.

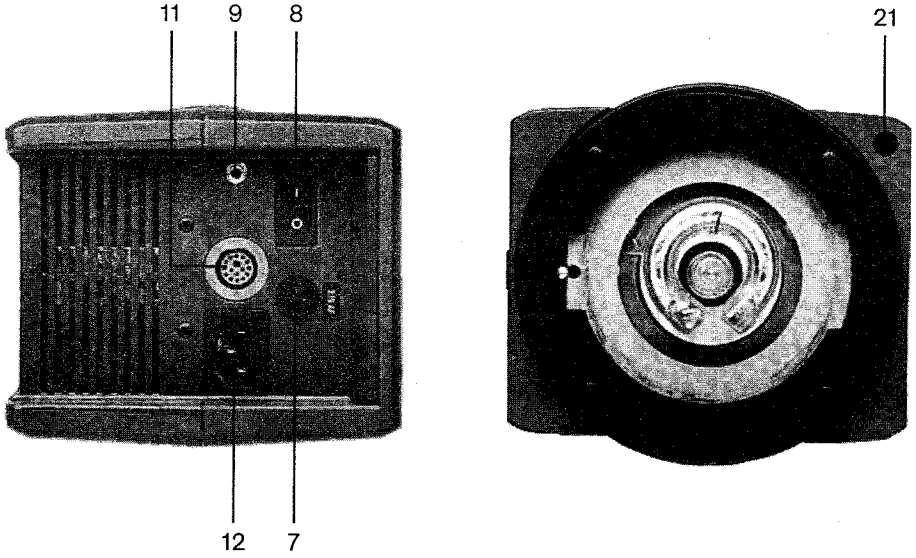
- Flash light contains, similar to sunlight, a specific portion of UV light. The undesirable side effects on skin and eyes are considerably reduced by using flash tubes with UV coating. Without these or other protective filters, use extreme care when shooting.

- Even when disconnected from power, dangerous voltages may continue within the interior of the device. For this reason, devices should be opened by trained personnel only.

Controls and displays

1. reflector release
2. slave cell / infrared receiver
3. control lamp / button for flash triggering
4. rotary switch for infrared and slave cell
5. rotary switch for modelling light
6. rotary switch for power control
7. fuse
8. main switch
9. jack for synchronous cable
10. switch for ready signal "buzz"
11. connector to remote control (Minipuls only)
12. connection socket for mains cable
21. umbrella holder





1. Minipuls 40/80, Impact S40/S80

The various models differ by:

a) Bayonet catch to attach reflector (Minipuls: Pulso bayonet,
Impact S: Impact bayonet)

b) Modelling light output (Minipuls 250 W, Impact S 150 W)

c) Flash energy (Minipuls 40 / Impact S 40 : 300 J
Minipuls 80 / Impact S 80 : 600 J

d) Minipuls units are fitted with a remote-control connector (11) on the rear of the housing. If the remote-control unit, art. no. 36.221.00 is connected, the operating elements on the unit itself are automatically shut off.

2. Application

Minipuls as well as Impact S units were designed for use "on location", for portrait studio sector as well as basic equipment for professional photography or as an addition to an existing broncolor system.

3. Commissioning

3.1 Remove grey plastic hood by rotating and simultaneous activation of the knob (1). Press intended reflector into the mounting and rotate in any direction until it locks.

3.2 Connect unit to earthed power (12). The unit will automatically set itself to the available power; modelling lights need not be set for available power.

3.3 Use main switch to power-up unit.

3.4 Set modelling light to intended mode of operation using control knob (5):
off - modelling light off
full - modelling light on full power
prop - modelling light proportional to flash energy
dim - modelling litht proportional but switched off during charging
Modelling lamp will illuminate after approx. 1 sec.

3.5 Set intended flash output via control knob (6).

3.6 Green control lamp (3) will illuminate: this is how the unit shows that it is ready.

3.7 Release test flash by pressing key (3).

3.8 Switch photocell or infrared receiver (2) on or off using the control knob (4).

3.9 If needed, plug in synchronous cable into jack (9) on rear of housing.

3.10 If you do not want the acoustical "ready" signal, switch it off by using a small screw driver and rotate it in the opening (10).

4. Flash tube

The flash tube can be plugged in. To replace it, **disconnect unit from power and allow to discharge for three minutes.** Then press the spring radially inward and carefully remove/plug in flash tube.

For Minipuls/Impact S following flash tubes are available.

	600 J
coating for 5500 K	art. no. 24.360.55
coating for 5100 K	art. no. 24.360.51
without coating	art. no. 24.360.59

5. Protecting glass

To protect flash tube and modelling light, we recommend using the protecting glass. Press it axially into its mount where it is retained by springs. Minipuls 40/80 art. no. 34.330.59 (without coating), Impact S40/S80 art. no. 24.501.59 (without coating).

6. Modelling lamp

6.1 Minipuls

Standard equipment for these units is a high-performance halogen modelling light 250 W/120 V (art. no. 34.224.00). As a result, modelling light is proportional to the Compuls, Opus and Pulso/Pulso A units if these have been set to proportionality step "prop 3". If Minipuls is equipped with modelling lights 150 W/120 V (art. no. 24.251.00), it will reach approximate proportionality step "prop 2" of the above units.
The modelling light of the Minipuls 40 and Minipuls 80 units is proportional.

6.2 Impact S

The standard design for these units is 150W/120V (art. no. 24.251.00). The modelling light of the Impact S40 and Impact S80 is proportional. There is an approximate proportionality to the Impact 41 and Impact 21 units.

7. Fuse

The fuse (7) 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 wrong fuses may result in bursting the halogen lamp.

8. Temperature monitor/heating

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 plastics housing or on the L-bracket only. Due to the intense heat radiation when a modelling light is working, keep the unit at a minimum distance of 1 m from flammable surfaces. The unit is fitted with 2 thermostats, one for the environment of the light components and one for the electronics. If temperature in the proximity of the light components rises excessively, the modelling light is shut off and the reloading time for the flash will be extended. In this status, you can continue working which is identified by the "ready" display changing from green to red. If an assignment requires a large number of flashes, we recommend using a 150W modelling light for Minipuls instead of the usual 250 W.
If the electronics reach their limit temperature (which, at a normal temperature level, could happen only after several hundred flashes in rapid sequence), the unit shuts off completely.

9 Battery operation

If no mains power is available, use the 12-volt car battery converter to load 1 - 2 units. The modelling light cannot be used on this mode (excessive load on battery).

- **Switch off modelling light and disconect the modelling lamp.**
- Connect converter to the 12-volt car battery with the + and - connector clamps.
- Connect unit(s) to converter; Switch on converter and unit(s).
- After flash work, switch off converter during pauses. Charge the battery if needed by allowing the car engine to run.
- A well-charged battery will allow some 200 releases of 300 J.

10. Mounting

The mounting bracket is located on the side of the housing.

This type of mounting will allow pointing the control side of the units in the direction of the camera at all times. To mount on tripod or ceiling, tighten knob with the 3/8" tripod thread.

11. Umbrella bracket

A special umbrella reflector will be supplied (see Section 13, Accessories). The mounting for the umbrella (21) is integrated in the housing.

12. Flash release

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

The infra-red receiver integrated in the unit is used for a wireless release by the following units

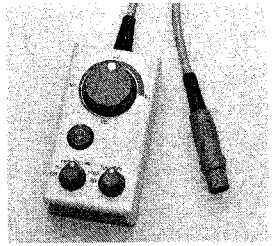
- IRI transmitter for small, bright rooms
- IRS transmitter for medium size rooms
- IRS-E transmitter for large or dark rooms
- FM flash lightmeter
- FCM lightmeter and contrast photometer
- FCC flash colourmeter chronoscope

When in use, make sure that the receiver cell of the unit is not blocked by obstacles.
The release is also possible via sync cable, photocell or with trigger button.

13 Accessories

13.1 Minipuls

Remote control for Minipuls, art. no. 36.221.00



The remote-control device to Minipuls permits to remote control all functions of the Minipuls unit (except the buzzer on/off). All functions of the remote-control have priority over the Minipuls commands - this means that the Minipuls commands are out of function if a remote-control is connected.

Operation

The remote-control device must be connected to the socket (11) provided for. Make sure the plug is correctly inserted. The Minipuls command-panel is now out of function, and the flash unit is controllable only by the remote-control device.

The operating elements of both Minipuls and remote-control and their handling are identical, for power setting, for the modelling-light, IRS/cell and test flash.

Almost the whole range of Pulso accessories can be used. Ristrictions are the following:

Reflectors

- For thermal reasons the use of Pulsoflex reflectors with a length of edge under 80 cm is only possible with a modelling light of 150 W
- When using the Mini-Hazylight reflector, the unit cannot be revolved because of the bracket.
- Accessories causing accumulated heat (e.g. conical snoot) can be used. The built-in thermal protection prevents eventual too high temperatures by turning the modelling light off for a period of time.

- As umbrella reflector the new art. no. 33.496.00 is to be used.
- The new types of umbrellas with short shaft designed for Minipuls and Impact S are to be used with these units (silver art. no. 33.459.00, white art. no. 33.460.00, transparent art. no. 33.461.00)

13.2 Impact S

Almost all Impact accessories can be used. Restrictions are the follwing:

- Accessories causing accumulated heat (e.g. conical snoot) can be used. The built-in thermal protection prevents eventual too high temperatures by turning the modelling light off for a period of time.
- As umbrella reflector the new art. no. 33.496.00 is to be used
- The new types of umbrellas with short shafts designed for Minipuls and Impact S are to be used with these units (silver art. no. 33.459.99, white art. no. 33.460.00, transparent art. no. 33.461.00)
- The new softlight reflector art. no. 23.111.00 must be used. You can continue to use existing softlight reflectors art. no. 23.110.00, if the counter-reflector of synthetic material is removed.
- The Impact Fibro kit art. no. 26.600.00 and Impaflex 15 x 125 cm art. no. 23.415.00 cannot be used due to reasons of temperature.

PS: 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 so as to repair it yourself. Leave maintenance and repairs to our broncolor repair service.

14. Technical data

	Minipuls 40	Minipuls 80
Flash energy	300 J	600 J
F-stop at distance of 2 m 100 ISO reflector P70	32 2/10	45 2/10
Flash duration t 0.1 t 0.5	1/400 s 1/1250 s	1/250 s 1/800 s
Charge time (for 100% of selected energy)	1,7 s	2,3 s
Ready display	optical, buzz (may be shut off)	
Control range	3 f-stops switchable in calibrated 1/3 stop increments	
Modelling light	halogen 250 W (off, prop, dim, full)	
Flash release	wireless via infrared transmitter, FM, FCM 2, FCC, photocell, synch cable, manual release button.	
Reflector mounting	Pulso bayonet	
Stabilized flash voltage	+/- 1%	
Power requirements	100 - 240 V, 50 - 60 Hz, 6 A	
Interference suppressor	SEV, VDE degree N	
Dimensions (w/o bracket)	134 x 142 x 337,5 mm/5,28 x 5,59 x 13,29 in.	
Weight	3,2 kg. / 7,05 lbs	4,0 kg. / 8,82 lbs
Remote control: Dimensions Weight with cable Cable lenght	 120 x 65 x 40 mm/4,72 x 2,55 x 1,57 in. 470 g/16,57 oz. 3,5 m/137,7 in.	

	Impact S40	Impact S80
Flash energy	300 J	600 J
F-stop at distance of 2 m 100 ISO reflector silver	32	45
Flash duration t 0.1 t 0.5	1/400 s 1/1250 s	1/250 s 1/800 s
Charge time (for 100% of selected energy)	1,7 s	2,3 s
Ready display	optical, buzz (may be shut off)	
Control range	3 f-stops switchable in calibrated 1/3 stop increments	
Modelling light	halogen 150 W (off, prop, dim, full)	
Flash release	wireless via infrared transmitter, FM, FCM 2, FCC, photocell, synch cable, manual release button.	
Reflector mounting	Impact bayonet	
Stabilized flash voltage	+/- 1%	
Power requirements	100 - 240 V, 50 - 60 Hz, 6 A	
Interference suppressor	SEV, VDE degree N	
Dimensions (w/o bracket)	134 x 142 x 322,5 mm/5,28 x 5,59 x 12,70 in.	
Weight	3,2 kg. / 7,05 lbs	4,0 kg. / 8,82 lbs

Subject to change in the interest of product enhancement.