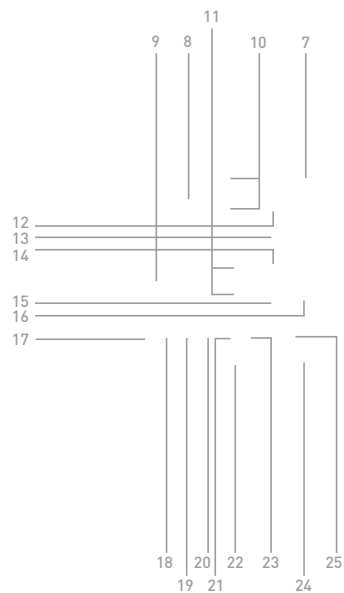




## Verso A2 | A4 + Power Dock

Operating instructions | Bedienungsanleitung | Mode d'emploi



#### Controls and displays\*

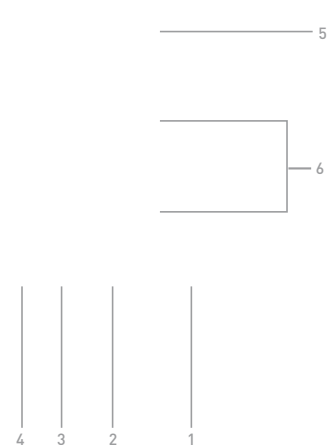
1. Mains switch on/off
2. Fuse
3. Sync socket
4. Antenna (only in RFS version)
5. Lamp base Outlet 1
6. Lamp base Outlet 2
7. Battery warning display
8. LCD display for flash energy channel 1
9. LCD display for flash energy channel 2
10. Flash energy control channel 1 up/down
11. Flash energy control channel 2 up/down
12. Photocell on/off
13. IR receiver and/or RFS interface on/off
14. Modelling light on/off
15. Visual ready display, green
16. Test key
17. Operating mode modelling light
18. Charging speed (normal / fast)
19. Acoustic ready display (buzzer)
20. Charging dimmer
21. Flash sequence
22. Additional function (aux)
23. Addressing for remote control (only in RFS version)
24. Infrared receiver cell
25. Photocells
26. Fan cooling
27. Connection socket for mains cable
28. Clamp for quick release fastener of the Power Dock
29. Cover with carrying handle
30. Clamp for quick release fastener of the Power Dock
31. Connection plug
32. Quick release fastener right
33. Display charge level Power Dock (battery charge)
34. Connection socket for mains cable (to charge the battery)
35. Centring pin
36. Quick release fastener left

\*also valid for Verso A4

#### Bedienungs- und Anzeigeelemente\*

1. Netzschalter ein/aus
2. Sicherung
3. Synchronbuchse
4. Antenne (nur bei Version RFS)
5. Leuchtenbuchse Kanal 1
6. Leuchtenbuchsen Kanal 2
7. Akku-Warnanzeige
8. Leuchtziffernanzeige für Blitzenergie Kanal 1
9. Leuchtziffernanzeige für Blitzenergie Kanal 2
10. Blitzenergieregulierung Kanal 1 auf/ab
11. Blitzenergieregulierung Kanal 2 auf/ab
12. Fotozelle ein/aus
13. IR-Empfänger und/oder RFS-Interface ein/aus
14. Einstelllicht ein/aus
15. optische Bereitschaftsanzeige, grün
16. Testauslösung
17. Betriebsart Einstelllicht
18. Ladegeschwindigkeit (normal / schnell)
19. akustische Bereitschaftsanzeige (Summer)
20. Ladedimmer
21. Blitzsequenz
22. Zusatzfunktion (aux)
23. Adressierung für Fernbedienung (nur bei Version RFS)
24. Infrarot-Empfängerzelle
25. Fotozellen
26. Ventilator Kühlung
27. Anschlussdose für Netzkabel
28. Halterung für Schnellverschluss des Power Dock
29. Abdeckung mit Traggriff
30. Halterung für Schnellverschluss des Power Dock
31. Kontaktstecker
32. Schnellverschluss rechts
33. Anzeige Ladezustand Power Dock (Akkuladung)
34. Anschlussdose für Netzkabel (zur Ladung des Akku)
35. Zentrierstifte
36. Schnellverschluss links

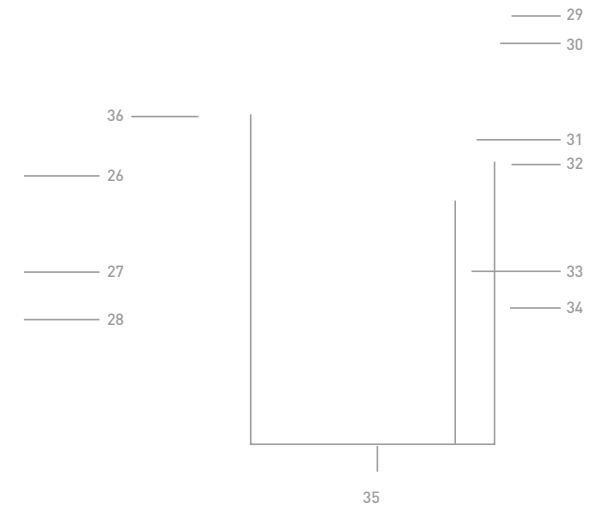
\*auch gültig für Verso A4



#### Eléments de commande et d'affichage\*

1. Interrupteur principal en/hors service
2. Fusible
3. Prise de synchronisation
4. Antenne (version RFS seulement)
5. Prise de torche Canal 1
6. Prise de torche Canal 2
7. Témoin d'avertissement concernant la charge du Power Dock
8. Affichage numérique pour puissance d'éclair sur canal 1
9. Affichage numérique pour puissance d'éclair sur canal 2
10. Réglage de la puissance d'éclair sur canal 1 plus/moins
11. Réglage de la puissance d'éclair sur canal 2 plus/moins
12. Cellule photo-électrique marche/arrêt
13. Récepteur IR et/ou interface RFS marche/arrêt
14. Lumière de mise au point marche/arrêt
15. Indicateur de disponibilité optique, vert
16. Touche «test»
17. Mode de fonctionnement de la lumière de mise au point
18. Temps de charge (normal / rapide)
19. Indicateur de disponibilité acoustique
20. DIM (économiseur de charge) marche/arrêt
21. Séquence (série d'éclairs)
22. Fonctions auxiliaires (aux)
23. Adresses pour télécommande (version RFS seulement)
24. Récepteur à infrarouges
25. Cellule photo-électrique
26. Refroidissement par ventilateur
27. Prise pour raccordement câble réseau
28. Crochet pour attache rapide au Power Dock
29. Couvercle de protection avec poignée
30. Fixation pour attache rapide au Power Dock
31. Connecteur
32. Loquet droit
33. Affichage de l'état de charge du Power Dock (charge accumulateur)
34. Prise pour câble réseau (pour charger l'accumulateur)
35. Pointes de centrage
36. Loquet gauche

\*également valable pour le Verso A4





Markus Klinko, USA


## Operating instructions | BRONCOLOR VERSO A2|A4

### Before use

We are pleased you have chosen a broncolor Verso A2|A4 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 be utilised exclusively for professional photo shooting and only by qualified personnel. Before starting up your flash light equipment read carefully all the information in your operating instructions. 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: 50J/m<sup>2</sup>. This value should not be exceeded!
- With due allowance for heat radiation, the distance between the lamp and a person or between the lamp and inflammable or heat sensitive surfaces should be at a minimum distance of 1 m!
- The power pack must be switched off to plug-in and to unplug! The lamp plugs and sockets have mechanical interlocks! When plugging in, ensure that those interlocks engage completely! To unplug, push down the locking spring below the cable guide and lift out the plug from the socket!
- Prior to replacing flash tubes, halogen lamps, protecting glasses or fuses, disconnect the power pack and the lamp from the power supply! Prior to replacing the halogen lamp or the flash tube, the lamp 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 power packs, lamps and accessories meet an extremely high safety standard! When connecting broncolor lamps to power packs of other brands or broncolor power packs to lamps or accessories of other brands, integrated safety measures may become ineffective! Due to different design features and contact assignment of the lamp plugs 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!
- Only lamps which are approved for operation with this power pack should be utilised!
- Only earthed extension cables which are approved for operation with the corresponding lamp should be utilised!
- 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°C to 35°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 power pack 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 get acclimatised to the new temperature before start up!
- Do not operate the units in an environment where there is a risk of explosion!
- The power pack should not be operated in or near water! Attention: high voltage!
- The power pack 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 lamp before connecting it to the power pack!
- For safety reasons, never operate the lamps 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 lamp has to be fastened on a stand or a suspension device! The lamp must be locked by tightening the mounting screw!
- Only sand-filled fuses of the type indicated on the safety type plate may be used! 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 or, on battery operation, only with the "Power Dock" available as accessory!
- 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!

## important safety instructions ⚠

- 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 sockets for mains cable and lamp outlets on the power pack and do not poke in them 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 lamps! 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 and its connected lamp 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 the power pack, the Power Dock, or the lamp 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 Verso a2|a4:

Use original broncolor packing for the transport of the power pack and for the transport of the Power Dock! The power pack should not be shipped connected to the Power Dock! The Power Dock should always be sent separated from the power pack!

### shipping instructions lamps:

Use original broncolor packing for the transport of the lamps. 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 is incomplete, remove flash tube, halogen lamp and protection glass from the lamp and send them separately!



## 1. appliCatiOn VerSOa

All areas of the professional flash photography for indoor and outdoor applications. This unit is designed as a mains supplied (AC-line) studio flash unit, which can be used as a mains-independent unit, using the available Power Dock accessory.

## 2 start up

### 2.1 mains operation

#### 2.1.1 mains voltage

The power pack Verso A adapts automatically to the respective mains voltage between 240V and 100V. Please make sure, that the halogen lamp bulbs (modelling light) of the connected lamp units correspond to the mains voltage.

#### 2.1.2 earthed mains (ac-line)

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

#### 2.1.3 start up

Connect the included mains cable to the connection socket of the power pack (27) and to the mains supply (mains socket). Use the mains (AC-line) switch (1) to power-up unit. The LCD displays for the flash energy (8/9) show the activated channels as well as their set values. Because of the automatic lamp detection by the power pack the corresponding channel is automatically activated as soon as one of the three lamp outlets are occupied (5/6). Additionally the green control lamp of the visual ready display lights up (15).

### 2.2 Battery operation

#### 2.2.1 connection power Dock to power pack Verso a

- 1 Check the display "charge level" (33) on the Power Dock. If the saved energy of the Power Dock is less than 50%, it is advisable to charge it using the included mains cable (charging time approx. 3 hours for approx. 80% of the charge) or to replace it by another Power Dock unit. When using for the first time, we recommend to fully charge the Power Dock.
- 2 Loosen the two quick release fasteners on both sides of the Power Dock (32/36) and remove the cover (29).
- 3 Unplug the mains cable from the power pack.
- 4 The connection socket (31) for the contact plug and the three holes for the centring pins (35) of the Power Dock are located on the bottom of the power pack Verso A. Make sure that the contact plug of the Power Dock is clean, to guarantee faultless contact.



#### attention:

- > always put the provided transport cover on the power Dock even when it is not connected to the power pack. particularly ensure that no metal objects come into contact with the plug pins!

- 5 Place the bottom of the power pack Verso A on top of the upper side of the Power Dock. The connection sockets of the mains cable must be located on the same side of the power pack and Power Dock (27/34). Then connect the power pack Verso A to the Power Dock. The connection socket for the mains supply (27) is thereby closed by a sliding lock. Then hook in the quick release fasteners (32/36) of the Power Dock to the corresponding holders of the power pack (28) pressing them gently to close.
- 6 Switch on power pack using the mains switch (1).

#### 2.2.2 start up

Use the mains (AC-line) switch (1) to power-up unit. The LCD displays for the flash energy (8/9) show the activated channels as well as their set values. Due to the automatic lamp detection of the power pack the corresponding channel is automatically activated as soon as one of the three outlets (5/6) is occupied. Additionally the green control lamp of the visual ready display lights up (15).

Verso A is equipped with an acoustic warning system in respect of the charge state of the battery. If the remaining battery energy has reached 50%, it will be indicated by an audible warning signal (7) and flashing of the display. On reaching the energy level of 10% a new audible warning signal is emitted and the battery warning signal display starts to flash permanently. If the battery is empty, the Verso A sends a warning signal and after 5 sec. both the power pack and the Power Dock are switched off. The battery package of the Power Dock must be recharged.

#### 2.2.3 automatic switch-off of the power pack

To protect the battery, the power pack is provided with the option "automatic switch-off". If desired, the waiting time can be set between 10 min. and 99 min. When this time is reached, the power pack switches off automatically (see chapter 8). Independent from this setting, the power pack switches to economy mode 1 min. after the last operation, which is visible from the slightly dimmed flashing display. Flash release is still possible on economy mode.

## 3 energy control

### 3.1 changing the flash energy

Use the "up/down" keys (10/11) to control the flash energy (flash intensity) of lamp channel 1 and 2 or the 3 lamp outlets (5/6). Whole numbers are full f-stops, decimals indicate 1/10 f-stop intervals. Brief pressure on the keys "up/down" runs the power up (or down) by a 1/10 f-stop interval, prolonged pressure by a full f-stop.

The maximum flash energy goes up to level 10, the minimum to level 3 on channel 1 or up to level 9 and down to level 3 on channel 2. The maximum asymmetry is therefore 6 f-stops or 7 f-stops intervals.

### 3.2 individual energy distribution (asymmetry) Verso a2

The flash energy is divided up as follows between the three lamp outlets.

Channel 1 controls the lamp outlet I			
→ Lamp outlet II and III not in use	=	100 % (1200 J) over outlet I	
→ Lamp outlet II and/or III in use	=	50 % (600 J) over outlet I	
Channel 2 controls lamp outlet II and III			
→ Lamp outlet II or III in use	=	50 % (600 J) over the outlet in use	
→ Lamp outlet II and III in use	=	25 % (300 J) per outlet	

The control range of the flash energy is as follows:

→ Channel 1 (without using channel 2):	over 7 f-stops from 1200 J to 9.5 J
→ Channel 1 and 2 or channel 2 (with 1 lamp):	over 6 f-stops from 600 J to 9.5 J
→ Channel 2 (with 2 lamps):	over 6 f-stops from 300 J to 4.7 J

Each channel is individually controllable, which means that when both channels are in use, the unit performs like two independent power packs each with 600 J.

### 3.3 individual energy distribution (asymmetry) Verso a4

The flash energy is divided up as follows between the three lamp outlets.

Channel 1 controls the lamp outlet I			
→ Lamp outlet II and III not in use	=	100 % (2400 J) over outlet I	
→ Lamp outlet II and/or III in use	=	50 % (1200 J) over outlet I	
Channel 2 controls lamp outlet II and III			
→ Lamp outlet II or III in use	=	50 % (1200 J) over the outlet in use	
→ Lamp outlet II and III in use	=	25 % (600 J) per outlet	

The control range of the flash energy is as follows:

→ Channel 1 (without using channel 2):	over 7 f-stops from 2400 J to 19 J
→ Channel 1 and 2 or channel 2 (with 1 lamp):	over 6 f-stops from 1200 J to 9.5 J
→ Channel 2 (with 2 lamps):	over 6 f-stops from 600 J to 9.5 J

Each channel is individually controllable, which means that when both channels are in use, the unit performs like two independent power packs each with 1200 J.

### 3.4 stabilisation of the colour temperature

The power pack Verso A is equipped with a circuit providing an approximate stabilisation of the colour temperature. Thereby the colour temperature can be constantly maintained over a range of 4 f-stops within  $\pm 100$  K.

## 4 modelling light

### 4.1 general

The "mod" key (14) switches on the modelling lamps for all connected lamps. When switched on, the green LED lights up. Lamps also have an additional modelling lamp switch.



#### attention:

> please note, the voltage of the modelling lamp must correspond with the mains voltage.

### 4.2 proportionality

In mains operation the brightness of the modelling light can be set proportionally to the flash intensity. It is explained in chapter 7, how to set the individual operating modes (modelling light proportionality).

To assure proportionality when operating units with different power output ratings, the units have various proportionality levels. Proportionality is guaranteed if the identical prop level has been set for all power packs. The higher the digit, the brighter the modelling light.

The following operating modes are possible:

- "p" Proportional modelling light with broncolor power packs up to 1200 J (Verso A2) or 2400 J (Verso A4). This operating mode (highest proportional level) is recommended, when during a working assignment only power packs of this power level are used.
- "p1" Proportional modelling light with broncolor power packs up to 6400 J
- "p2" Proportional modelling light with broncolor power packs up to 3200 J
- "p3" Proportional modelling light with broncolor power packs up to 1600 J
- "p4/5" If a power pack is operated at a low output level, the halogen modelling light will be, as known, relatively weak and yellowish. To counteract this problem, two additional modelling light proportionality levels are available: P4 for 800 J and less, P5 for 400 J and less. Thus the brightness of the modelling light can be increased.
- "hi" All lamps operate at full modelling light power independent of flash output.
- "I O" Lighting level is reduced for all lamps independent of the flash output to reduce power consumption and extend the service life of the halogen lamps.

Pressing the "mod" key (14) (for 1 sec.) when the modelling lamp is on, will give direct access to the "HI" mode. To return to the previous mode briefly press "mod" again.

## 4. mODEl lIng lIght

Highest possible proportionality settings when combining units of different output:

	nano 2 Verso a2 topas a2 graf t 2, a2 mobil a2r	nano a4 topas a4 graf t a4 Verso a4	topas a8evolution
nano 2 Verso a2 topas a2 graf t 2, a2 mobil a2r	P3 (or "P" using only Verso A2 / Nano 2)	P2	P1
nano a4 topas a4 graf t a4 Verso a4	P2	P2 (or "P" using Verso A4 / Nano A4)	P1
topas a8evolution	P1	P1	P1

Example 1:

A power pack Verso A4 is operated together with a power pack Topas A8 Evolution. The modelling light is proportional when both are set to mode "P1".

Example 2:

A power pack Verso A2 is operated with a Nano 2. The modelling light is proportional and most intense when both are set to mode "P".

### 4.3 modelling light in battery operation

In battery operation the lamps Pulso G and Unilite can be equipped with the following halogen lamps:

Maximum power of modelling light with mains voltage 200–240 V:

Halogen 1×650 W / 2×300 W / 3×150 W

Maximum power of modelling light with mains voltage 100–120 V:

Halogen 2×300 W / 3×150 W

If lamps with a higher total rating are connected, they switch off. The unit Power Dock is equipped with a converter which converts the 36 V voltage of the battery package, depending on the local available voltage, automatically into a mains voltage of 200–240 V or 100–120 V. The mains voltage can be modified manually if desired (see chapter 8).

To control the modelling light and to protect the battery, the Verso A has variable settings of the on time of the modelling light between 1 min. and 20 min. (see chapter 8).

Exception: When using the lamp with halogen lamps of 1×650 W or 2×300 W, the setting of the on time is max. 7 min.



**attention:**  
> in case of thermal overloading of the power Dock due to the modelling light, the LED key "mod" (14) will start blinking and the modelling light will extinguish until the end of the cooling process.

### 4.4 modelling light switch on lamp

The switch, on the lamps, permits selective lighting control with the modelling light. To avoid damage to the lamp filament, always switch off the modelling light before moving the lamp, and let the lamp cool down.

## 5. r e l e a s e a n D r e m O t e c O n t r O l

### 5.1 photocell (cell)

The photocells can be switched on or off by using the "cell" key (12). When they are activated the green LED lights up. The sensitivity of the photocells can be reduced if necessary (see chapter 8).

After a flash series an active photocell is blocked, and the green LED starts blinking. By pressing the "cell" key, the block is cancelled. When triggering via the photocells, ensure that the infrared receiver of the unit is not obstructed by obstacles.

### 5.2 infrared receiver (ir/rf)

The infrared receiver and, if available the RFS interface, can be switched on and off by using the "ir/rf" (13) key. As option you can set both functions (IR and RFS) or only one of those which should be switched on or off with this key (see chapter 8). Is one or both activated, the green LED lights up.

When triggering via infrared receiver (IR), ensure that the infrared receiver of the unit is not obstructed by obstacles.

### 5.3 infrared flash release channel

The power pack Verso A can be triggered with the broncolor infrared emitter IRX 2. If the power pack is triggered via infrared, the flash is released after a transmission delay of 1/1000 s.

### 5.4 r f s interface

By default, the Verso A power packs are equipped with an integrated 10 channel RFS interface (Radio Frequency System), which can be switched on (or switched off) with key combinations (see chapter 8). Each channel (studio) can control up to 20 units. This interface allows remote control or flash release of the unit via radio, from transmitter RFS, as well as transceiver RFS from PC or Macintosh computers. For operation per screen there are four memories for lighting situations available.



## 5. release and Remote Control

### 5.5 remote control channels

The remote control can only be used with the power packs Verso A RFS and is effected by radio over the separate channels (studio workstations). The procedure is described in chapter 7.

### 5.6 power pack addresses

The assignment of addresses by radio to each unit is only possible with the power packs Verso A RFS. This allows individual operation within the same studio workstation. The definition of the unit addresses is described in chapter 7.

### 5.7 sync socket

Synchronous cables art. no. 34.111.00 or 34.112.00 may be plugged into the socket (3) to release flashes via cable.

### 5.8 "test" key

The key "test" (16) allows manual release of the power pack (see chapter 6.1), when the green LED lights up.

## 6. flash ready signals Visual /audible

### 6.1 the visual ready signal

Is the green LED at the "test" key (16). It lights up only when the unit is fully charged to the set flash energy.

After a flash the LED goes out and lights up again when the unit is fully charged once more. Triggering is only possible after a full charge. The brightness of the visual ready signal can be reduced if necessary (see chapter 8).

### 6.2 the audible signal (buzzer)

sounds when the power capacitors are at 100% charge of the set flash energy. It may be switched on or off (see chapter 8).

### 6.3 audible fault signal

When the flash discharge fails, a warning signal of approx. 3s duration will sound.

## 7. setting additional functions

The "aux" key (22) is used to select additional functions. Repeated actuation of the key runs through the following display modes:

→ Select proportionality level of the modelling light	LED	"prop"	blinks (17)
→ Fast charge on/off (on/--)	LED	"fast"	blinks (18)
→ Buzzer on/off (on/--)	LED	"buz"	blinks (19)
→ Dim charge on/off (on/--)	LED	"dim"	blinks (20)
→ Define sequences (serial flashes)	LED	"seq"	blinks (21)
→ Studio address/set unit address	LED	"unit"	blinks (23)
→ Return to standard display		no LED blinks	

After the setting has been performed, the standard display can be re-activated by pressing the "aux" key (22) or automatically after a waiting time of 4 seconds.

To set the additional functions select the respective LED (example: function "buz"). The digital display of channel 1 (8) will then show the actual value which can be changed with the "up/down" key (10). If a setting is entered which deviates from the basic setting value, the respective LED will remain lit as a reminder after the display returns to standard (exception: function "prop"). If the unit is switched off and on again, it will be in the "standard display" mode. Previously set additional functions are retained.

### 7.1 proportionality level of the modelling light (prop)

The proportionality level of the modelling light can be selected by briefly pressing on the "up/down" key (10) of channel 1. With repeated actuation of the key the following modes can be set, each shown respectively on the digital display (8): LO, P, P1, P2, P3, P4, P5, HI.

### 7.2 fast charge (fast) on/off (on/--)

The mode "fast charge" can be selected by briefly pressing on the "up/down" key (10) of channel 1 (on/--). To avoid overloading the mains supply, the "dim" function remains on permanently during fast charge (see chapter 7.4) and cannot be deactivated. The LED "dim" lights up as soon as the modelling light is switched on ("mod" key)



#### attention:

- > the mode fast charge is only suitable for certain lamp units (see chapter 12) because of the large charge power.

### 7.3 Buzzer (buz) on/off (on/--)

The ready buzzer sounds when the power capacitors are 100% charged up. The ready buzzer is switched on or off (on/--) by briefly pressing the "up/down" key (10) of channel 1. The warning signal will remain audible even if the ready buzzer is switched off.

### 7.4 charging dimmer on/off (dim)

The dim function can be switched on or off (on/--) by briefly pressing the "up/down" key (10) of channel 1 (on/--). If the dim function is switched on, the modelling light will dim on mains (AC-lines) operation or extinguish (on battery operation) when charging takes place. This feature can be used as a visual flash monitor and to reduce the current load on weak mains (AC-lines). To avoid overloading the mains supply, the "dim" function remains permanently on during fast charge (see chapter 7.4) and can not be deactivated. This also applies to operation with the Power Dock (battery operation).

### 7.5 sequences (seq) (serial f ashes)

This function permits to set a defined number of flash discharges from 1 to 50. By briefly pressing the flash energy control "up/down" key (10) of channel 1, select the desired number of flashes. With a long pressure on the flash energy control "up/down" key (10), changes the setting in intervals of ten.



Each release signal triggers the selected number of flashes. A running sequence can be stopped by briefly pressing the "aux" (22) key or by switching the unit off and on again. This function is deactivated, when the number of flashes are set to "0" or the power pack is switched off.

### 7.6 studio / unit address (unit)

The function "unit" (23) allows to assign to each RFS unit an individual unit address and a studio workstation (remote control channel).

#### assignment of unit address:

Select the LED "unit" with the "aux" key (22). On the LCD display of channel 2 (9) the letter "U" appears. On the LCD display of channel 1 (8) the set unit address appears. By briefly pressing the flash energy control keys "up/down" (10) of channel 1 the desired power pack address can be assigned. With a long pressure on the flash energy control keys "up/down" the setting changes in intervals of ten. It is possible to assign per studio workstation up to 20 different unit addresses ("01" to "20"). For the correct functioning of the remote control via radio, each unit must be assigned with its own unit address.

#### assignment of studio workstation:

When re-pressing the "aux" key the letters "CH" will appear on the LCD display of channel 2 (9). On the LCD display of channel 1 (8) the set studio number will appear. By briefly pressing the flash energy control keys "up/down" (10) of channel 1 the desired studio number can be assigned. With a long pressure on the flash energy control keys "up/down" the setting changes in intervals of ten. It is possible to assign up to 10 workstations ("01 to 10"). All units, which are to be triggered using the same camera, must have the same studio number.

The basic settings ex works can be viewed and in some instances changed with the following procedure:

When the unit is switched on press the keys "mod" (14) and "aux" (22) at the same time for approx. 5 sec. (the blinking of the LED array "prop" / "fast" / "buz" / "dim" / "seq" / "unit" shows the programming mode).

On the LCD display of channel 2 (9) the selected function number will appear, and on the LCD display of channel 1 (8) the actual value or the actual setting within the selected function number is shown. Both values can be altered by using the flash energy control keys "up/down" (10/11). With a long pressure on the flash energy control keys "up/down" the setting changes in intervals of ten.

Within the function numbers 1 to 5 and 11 the settings can be changed with the flash energy control keys "up/down". The function numbers 0, 6, 9 and 10 can be shown in different pairs of those multi-digit values.

Return to normal operation by pressing (1 sec) the "aux" key or by switching off and on again the unit or automatically after a waiting time of 20 sec.

function number	meaning and possible settings
-----------------	-------------------------------

0	<p><b>program index:</b> Standard display (xx.xx)  <b>program number:</b> By pressing flash energy control key "down" (xx.xx)</p> <p>The power pack is equipped with 3 microprocessors and a fourth one in the Power Dock unit. By pressing the energy control key "up" several times, the 4 program indices can be selected.</p>
1	<p><b>Definition function "ir/rf"</b> (see chapter 5)            Setting ex works: LCD display shows the value "3"            = IR receiver and RFS interface (if available) activated.            Display value "1" = only RFS interface activated.            Display value "2" = only IR receiver activated.</p>
2	<p><b>Definition of limitation of the on time of modelling light</b>            Setting ex works: 3 min.            By pressing the flash energy control keys "up/down" set the time duration between 1 min. and 20 min. (see chapter 13 for details and exceptions).</p>
3	<p><b>mains voltage modelling light with battery operation</b> (see chapter 4.3)            The unit selects the mains voltage of the modelling light automatically. The mains voltage can be selected manually if desired: by pressing the flash energy regulation keys "up/down" set the desired mains voltage.            Display value "11" = Mains voltage 110V            Display value "22" = Mains voltage 220V</p>

- 
- 4 automatic switch-off in battery operation** (see chapter 13)  
Power pack switches off automatically after a selectable waiting time.  
Setting ex works: 10 min.  
By pressing the flash energy regulation keys "up/down" select the desired time duration between 10 min. and 99 min. Setting 0 = automatic mode deactivated
- 
- 5 sensitivity of photocell** (see chapter 5)  
Setting ex works "on": both photocells are switched on  
By pressing the flash energy regulation keys "up/down", the photocell with the higher sensitivity can be switched off. Through this the sensitivity of the photocell will be reduced overall. In this mode the LCD display shows the value "--".
- 
- 6 flash counter**  
Figure group in the digital display:  
xxxxxx = standard display  
xxxxxx = after activating the energy control key "down"  
xxxxxx = after activating the energy control key "down"
- 
- 7 Delivery date:** month
- 
- 8 Delivery date:** year
- 
- 9 series number of the unit:**  
Figure group in the digital display: xxxx
- 
- 10 series number of the unit:**  
Figure group in the digital display: xxxx
- 
- 11 Brightness ready signal** (see chapter 6)  
Setting ex works: "--"  
This function reduces the brightness of the ready display. If the function is activated, the LCD display shows the value "on".
- 

### 9.1 Display "th"

When working with long flash sequences and fast charging times, charging of the power pack may be blocked to protect the flash tube from overloading and to allow a cool-down period of 30 seconds. This is indicated when a signal is audible for a longer time and the blinking "th" appears on the LCD display of channel 1 (8). The fan continues to operate, thus accelerating the cooling effect. If excessively high temperatures build up inside the unit despite the fan cooling effect, the charge mode will be blocked for a certain period of time and a long audible signal will be emitted.

During the cool-down period "th" (not blinking) appears on the LCD display of channel 1 (8). The fan continues to operate, thus accelerating the cooling effect.

If you activate the fan several times it may happen, that the LCD display of channel 1 / (8) shows "th" (no blinking). Parallel to this the LCD display of channel 2 / (9) shows "A4" During this procedure the fan cooling process is slightly longer.



#### attention:

- > **Do not switch off the power pack during cooling!**

If the power pack is switched off too early, it is likely, despite a long break, that only a few flashes are possible when switching the unit on again, because the processor has not been able to follow the entire cooling process.

### 9.2 Display "a1"

The unit is equipped with an automatic afterglow block. If the flash tube exhibits afterglow (for example at the end of its service life), this block will stop further charging to prevent consequential damage. A1 will show on the display of LCD display channel 1 (8). In this status, the ready lamp (15) is no longer green. The block can be cancelled by switching the unit off and on again.

### 9.3 fuse

The fuse (2) is located on the front panel of the unit. In the event of an electrical malfunction in the power pack, the circuit breaker will automatically interrupt the power source. Sand-filled fuses with value 16 T may only be used (sand-filled fuses can be identified by their opaque fuse container). Using wrong fuses can seriously damage the power pack.

### 9.4 monitoring of the modelling light

If the power pack Verso A was previously operated on a mains voltage of 100 V – 120 V and then connected to a mains voltage of 200 V – 240 V, an acoustic signal will sound when switching on the unit, and the modelling light will blink at a safely reduced voltage. This function serves as a reminder, that the modelling lamp must be replaced and to avoid bursting of the lamps.



#### attention:

- > **make sure that the lamp used is equipped with a halogen bulb lamp which complies with the local power supply ratings!**

Switch the unit off and on again to return to standard operation.

### 9.5 acoustic and optical flash monitor

At the end of their service life, flash tubes often have triggering interruptions. This fault is indicated by an audible, intermittent signal. In addition to this, the LCD display (8/9) blinks, and indicates the channel to which the corresponding lamp is connected.



**attention:**

> **check the functional efficiency of the flash tubes and replace if necessary!**

The blinking LCD display can be deactivated by pressing the key "aux" (22) or the key "up/down" for regulation of the energy control (10/11).

## 10. service / repair

Your broncolor power pack is a precision device which will work for many years without malfunction if you take proper care of it. If nevertheless malfunctions do arise, please do not attempt to open the unit to repair it yourself. Even when the unit is switched off, dangerous voltages may remain within the interior of the device. Always leave service and repairs to the broncolor after-sales service.

### 11.1 general

Verso A2|A4 can be operated as a mains-independent (AC-line) power pack. The available accessory unit Power Dock (art. no. 36.124.00) comprises a high-performance battery package with an integrated charger, an independent processor for battery management, and monitoring of modelling light as well as a power circuit, which produces the necessary voltage for the operation of the modelling light. The unit is connected to the bottom of the power pack (see chapter 2.2.1).

### 11.2 charging battery

The mains cable for charging the Power Dock is stored in the cover (34). Connect the mains cable to the connection socket (34) of the Power Dock as well as to the mains supply. The charging mode of the battery has two levels, which are displayed by the flashing charge display (33).

Level 1: The battery is charged in fast charge mode up to approx. 80 % of full charge. Duration, depending on state of charge, up to 3 hours.

Level 2: The battery is being recharged slowly to 100 % (duration up to approx. 5 hours) and then kept on charge.



**attention:**

> **Do not operate the Verso A with the power Dock during charging.**

### 11.3 care of the power Dock

The battery used is sealed and does not require any special care. It does not show any particular "memory effect" and does not need to be discharged regularly. Ensure, however, that the battery package never runs down. The bottom bar (10% of battery capacity) should always be visible. Therefore, Verso A and Power Dock switch off automatically when the battery voltage sinks too low. As a leakage current flows even when the unit is switched off, it is highly recommendable, to fully charge the Power Dock after use. Additionally, the charge situation must be controlled every two months and the battery package has to be fully recharged.

If the charge display does not show a fully charged battery package and the value does not change within the next 1–2 hours even though connected to the mains cable, the battery must be controlled by a local broncolor service station.

## 12 Lamps

In the "fast charging mode" the power pack Verso A2 and Verso A4 has a very high charging capacity. Therefore each connected lamp has to be equipped with a flash tube with high power rating. Thus in this mode the Verso A2 and Verso A4 must be operated at present only with the following lamps:

### 12.1 Verso a2

#### mains and battery operation

- Lamp Pulso G with flash tube 1600 J\*
- Lamp Pulso G with flash tube 3200 J\*
- Lamp Unilite with flash tube 1600 J\*
- Lamp Unilite with flash tube 3200 J\*
- Special effect lamp Litestick
- Ringflash C
- Ringflash P

#### Only mains operation

- Lamp Pulso F2 with flash tube 1600 J\*
- Lamp Pulso F4 with flash tube 1600 J\*
- Lamp Pulso F4 with flash tube 3200 J\*

\* Operation only permitted with a flash tube, with a black mark (star) on the ceramic base.

### 12.2 Verso a4

#### mains and battery operation

- Lamp Pulso G with flash tube 3200 J\*
- Lamp Unilite with flash tube 3200 J\*
- Special effect lamp Litestick
- Ringflash C
- Ringflash P

#### Only mains operation

- Lamp Pulso F4 with flash tube 3200 J\*

\* Operation only permitted with a flash tube, with a black mark (star) on the ceramic base.

For thermal reasons, the flash tubes 1600 J and 3200 J are only available as uncoated tubes. Therefore those lamps must be used with a UV-coated protecting glass. The following information refers to the lamps Pulso G (art. no. 32.115.XX / 32.116.XX) and Unilite (art. no. 32.113.00 / 32.114.00); see chapter 12.3 to 12.9:

### 12.3 replacing flash tubes



#### attention:

- > prior to each exchange of the flash tube, the lamp must be disconnected from the power pack! Before replacing flash tubes let the lamp cool down for 10min.!

Lamps use plug-in flash tubes.

The protection glass has a line mark and the glass rim has three notches. When pulling off the protection glass from the locking device of the lamp, the line mark must be at the top. To change the flash tube, carefully pull off the protecting glass. Pull straight, without tilting. Afterwards pull the flash tube straight along the lamp axis. When inserting the tube, check that the ceramic base is fully pushed back in.

Then the protecting glass has to be re-inserted in front of the modelling light and flash tube. When pushing the protection glass into the locking device of the lamp, the line mark must again be at the top. After the protection glass has latched into place, it must be turned slightly, to avoid it becoming detached. Because the Pulso G and Unilite lamp can be operated with 1600 J flash tubes as well as with 3200 J flash tubes, a corresponding warning sign is supplied with each flash tube. Please stick this warning sign on the lamp plug when inserting the flash tube.

### 12.4 replacing halogen lamps



#### attention:

- > prior to each exchange of the halogen lamp, the lamp must be disconnected from the power pack! Before replacing halogen lamps let the lamp cool down for 10min.!

The halogen lamps are plug-in. Taking the service life into consideration, the halogen lamp should not be handled with bare hands. Exchange of the halogen lamp is practically identical to that of the flash tube. The Pulso G, Unilite and Picolite lamps can be operated on the local mains (AC-line) voltage (100V–240V), when a halogen lamp is used which corresponds to the voltage.

### 12.5 cooling fan

A cooling fan in the lamp cools the flash tube and modelling lamp. It also runs when the modelling lamp is turned off.

### 12.6 thermal protection

The lamps are fitted with an automatic thermal protection. Should the lamp overheat (e.g. by impeding the flow of cooling air), the modelling light is shut off. Nevertheless you may continue producing flashes.

### 12.7 lamp plugs

The lamp plugs and sockets have mechanical locking devices to prevent inadvertent disconnection. When plugging in, ensure that the locking device engages completely. To unplug, push down the locking spring below the cable guide and lift out the plug. The power pack must be switched off to plug-in and to unplug.

### 12.8 light shapers (reflectors, area lamps etc.)

Pulso G and Unilite have a bayonet fitting to attach light shapers providing a 360° rotation facility for the mounted accessory.

### 12.9 fuses

Only sand-filled fuses of the type indicated on the type plate may be used; otherwise the halogen lamp may burst.

## 13 technical Data

Verso a2 r f s   31.031.XX		
	mains operation Verso a2	Battery operation Verso a2
Flash energy	1200 J	1200 J
f-stop at 2 m (6½ ft.) distance 100 ISO, reflector P70	45 7/10	45 7/10
Flash duration t0.1 (t0.5) at 230V	1200 J: 1/500 s (1/1500 s) 600 J: 1/900 s (1/2500 s) 300 J: 1/1200 s (1/3500 s)	1200 J: 1/500 s (1/1500 s) 600 J: 1/900 s (1/2500 s) 300 J: 1/1200 s (1/3500 s)
Charging time in fast charge mode (for 100 % of selected energy)	0.2 – 0.8 s (200 – 240V) 0.2 – 0.9 s (110 – 120V) 0.3 – 1.0 s (100V)	0.3 – 1.5 s (fully charged battery)
	Can be switched to normal or fast charging mode.	
	Automatic adaptation to respective mains voltage. (Voltage fluctuations up to ±10 % do not cause any restrictions)	
Ready display	Visual and audible (can be switched off); signals when 100 % of selected energy is reached	
Lamp outlets	3	
Power output distribution	Individual (asymmetrical)	
Controls	Illuminated silicone keyboard, resistant to dust and scratches, LED as well as two LCD displays	
Control range of flash energy	Channel 1 (without using channel 2): Over 7 f-stops in 1/10 f-stop intervals (1:128) Channel 1 and 2 or channel 2: Over 6 f-stops in 1/10 f-stop intervals (1:64)	
Maximum asymmetry	6 f-stop increments channel 1: level 9 / channel 2 (1 lamp): level 3 respectively 7 f-stop increments channel 1: level 9 / channel 2 (2 lamps): level 3	

Verso a4 r f s   31.033.XX		
	mains operation Verso a4	Battery operation Verso a4
Flash energy	2400 J	2400 J
f-stop at 2 m (6½ ft.) distance 100 ISO, reflector P70	64 7/10	64 7/10
Flash duration t0.1 (t0.5) at 230V	2400 J: 1/250 s (1/750 s) 1200 J: 1/450 s (1/1250 s) 600 J: 1/600 s (1/1700 s)	2400 J: 1/250 s (1/750 s) 1200 J: 1/450 s (1/1250 s) 600 J: 1/600 s (1/1700 s)
Charging time in fast charge mode (for 100 % of selected energy)	0.3 – 1.7 s (200 – 240V) 0.3 – 1.8 s (110 – 120V) 0.3 – 1.9 s (100V)	0.3 – 3.2 s (fully charged battery)
	Can be switched to normal or fast charging mode.	
	Automatic adaptation to respective mains voltage. (Voltage fluctuations up to ±10 % do not cause any restrictions)	
Ready display	Visual and audible (can be switched off); signals when 100 % of selected energy is reached	
Lamp outlets	3	
Power output distribution	Individual (asymmetrical)	
Controls	Illuminated silicone keyboard, resistant to dust and scratches, LED as well as two LCD displays	
Control range of flash energy	Channel 1 (without using channel 2): Over 7 f-stops in 1/10 f-stop intervals (1:128) Channel 1 and 2 or channel 2: Over 6 f-stops in 1/10 f-stop intervals (1:64)	
Maximum asymmetry	6 f-stop increments channel 1: level 9 / channel 2 (1 lamp): level 3 respectively 7 f-stop increments channel 1: level 9 / channel 2 (2 lamps): level 3	

## 13 technical Data

Verso a2 rfs   31.031.XX		
	mains operation Verso a2	Battery operation Verso a2
Modelling light	for 200–240V, halogen max.: 3×650W	for 200–240V, halogen max.: 1×650W 2×300W 3×150W
	for 100–120V, halogen max.: 3×300W	for 100–120V, halogen max.: 2×300W 3×150W
	Proportional to flash energy and "full" and "low" settings. Proportionality adjustable to other broncolor power packs and monolights and their various output ratings.	Variable settings of the on time to protect the rechargeable battery between 1 min. and 20 min. Exception: Setting of the on time max. 7 min. if used with 1×650W or 2×300W.
Additional functions	<ul style="list-style-type: none"> <li>→ Sequences (flash series) up to 50 flash releases</li> <li>→ Sensitivity of the photocell can be reduced</li> <li>→ Visual ready display can be dimmed</li> <li>→ Simplified programming of the studio and unit addresses</li> <li>→ Option automatic switch-off of the power pack in battery operation (settings from 10 min. to 99 min.)</li> </ul>	
Flash release	Manual release button, photocell (can be switched off), infrared receiver (can be switched off), sync cable, FCM 2, IRX2, RFS Transmitter, RFS Transceiver	
Remote control	via remote control from a computer with integrated 10 channel RFS interface up to 20 units per channel	
Radio release	operational distance outdoors up to 50m/164 ft: range up to 300m/984 ft operational distance in closed rooms up to 30m/98 ft: range up to 300m/984ft	
No. of sync sockets	1	
Dimensions (L×W×H)	290×185×315 mm (11.4×7.3×12.4")	
Weight power pack	7.5 kg (16.5 lbs)	
Weight Power Dock	12.3 kg (27.1 lbs)	

Verso a4 rfs   31.033.XX		
	mains operation Verso a4	Battery operation Verso a4
Modelling light	for 200–240V, Halogen max.: 3×650W	for 200–240V, Halogen max.: 1×650W 2×300W 3×150W
	for 100–120V, Halogen max.: 3×300W	for 100–120V, Halogen max.: 2×300W 3×150W
	Proportional to flash energy and "full" and "low" settings. Proportionality adjustable to other broncolor power packs and monolights and their various output ratings.	Variable settings of the on time to protect the rechargeable battery between 1 min. and 20 min. Exception: Setting of the on time max. 7 min. if used with 1×650W or 2×300W.
Additional functions	<ul style="list-style-type: none"> <li>→ Sequences (flash series) up to 50 flash releases</li> <li>→ Sensitivity of the photocell can be reduced</li> <li>→ Visual ready display can be dimmed</li> <li>→ Simplified programming of the studio and unit addresses</li> <li>→ Option automatic switch-off of the power pack in battery operation (settings from 10 min. to 99 min.)</li> </ul>	
Flash release	Manual release button, photocell (can be switched off), infrared receiver (can be switched off), sync cable, FCM 2, IRX2, RFS Transmitter, RFS Transceiver	
Remote control	via remote control from a computer with integrated 10 channel RFS interface up to 20 units per channel	
Radio release	operational distance outdoors up to 50m/164 ft: range up to 300m/984 ft operational distance in closed rooms up to 30m/98 ft: range up to 300m/984ft	
No. of sync sockets	1	
Dimensions (L×W×H)	290×185×380 mm (11.4×7.3×14.96")	
Weight power pack	10.4 kg (22.88 lbs)	
Weight Power Dock	12.3 kg (27.1 lbs)	

## 13. technical Data

Verso a2r fs   31.031.XX	
	mains operation Verso a2      Battery operation Verso a2
Stabilised Flash release	± 0.5%
Power requirements	200–240V / 50 Hz: 10A 110–120V / 50–60 Hz: 16A 100V / 50 Hz: 16A
Number of flashes per fully charged battery	Fast charge: approx. 350 at full output Normal charge: approx. 450 at full output
Standards*	UL 122, EC standard 73/23, 89/336 and 99/5, ERM EN 300 220-1,-3, EMC EN 301 489-1,-3, EN 60950, EN 50371, FCC Part 15

Verso a4r fs   31.033.XX	
	mains operation Verso a4      Battery operation Verso a4
Stabilised Flash release	± 0.5%
Power requirements	200–240V / 50 Hz: 10A 110–120V / 50–60 Hz: 16A 100V / 50 Hz: 16A
Number of flashes per fully charged battery	Fast charge: approx. 180 at full output Normal charge: approx. 240 at full output
Standards*	UL 122, EC standard 73/23, 89/336 and 99/5, ERM EN 300 220-1,-3, EMC EN 301 489-1,-3, EN 60950, EN 50371, FCC Part 15

\*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1 This device may not cause harmful interference and
  - 2 This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## 14. Verso Variations

### 14.1 modification to Verso a2|a4r fs

There is the possibility, to modify the Verso A2|A4 power packs later on with a RFS interface. The modification will be made by the customer service centre of our broncolor agency in your country.

### 14.2 Verso a2|a4plus

Because of the laws in some countries, the use of the broncolor radio system is not allowed. Therefore the Verso A2|A4 power pack is also available in the version Verso A2|A4 plus (that means with cable remote control). Besides the cable connection between the power pack and the computer, the application with RFS is almost identical.



**attention:**  
there is no camera transmitter available for Verso a2|a4plus!

	Verso a2 a4plus
Flash release	Manual release button, photocell and IR-receiver (can be switched off), sync cable, IRX 2
Connection cable	Connection cable length from computer to unit: 5 m (16,4 ft) Connection cable length between the units: 2 m (6,5 ft)
Standards*	UL 122, EC standard 73/23, 89/336 and 99/5, EMC EN 301 489-1,-3 EN 60950, EN 50371, FCC Part 15

Subject to change in the interest of technical development.

\*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

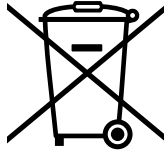
- 1 This device may not cause harmful interference and
  - 2 This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



## 15. environmental protection information

When no longer in use, this product may not be deposited in the normal household waste but should be brought to a collection point for the recycling of electrical and electronic appliances.

The materials are recyclable as marked. By re-use, recycling or another form of using old appliances you are making an important contribution towards the protection of the environment. Please ask your local authorities for the appropriate disposal point.



## 16. guarantee

All broncolor 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 broncolor service station.

### april 2009

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

Standard reflector P70  
Normal-Reflektor P70  
Réflecteur normal P70  
33.107.00

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Narrow angle reflector P45  
Engstrahl Reflektor P45  
Réflecteur petit angle P45  
33.104.00

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Ringflash C  
32.462.XX

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Honeycomb grid for Ringflash C, 3 pieces  
Wabenraster zu Ringflash C Set zu 3 Stück  
Grille en nid d'abeilles pour Ringflash C, Jeu de 3 pièces  
33.219.00

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Soft reflector  
for Ringflash C  
33.123.00

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Pulsoflex C  
80x 140cm  
33.446.00

Pulsoflex EM  
80x 140cm  
33.417.00

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Balloon  
33.161.00

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brancolor Flooter  
32.431.00



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Kreative Lichtführung, Präzision, Inspiration, Styling und Emotionen - auch im Zeitalter der digitalen Fotografie haben sich die Stichworte nicht geändert. broncolor bietet verschiedene Workshops von 2- oder 3-tägiger Dauer an. Sind Sie interessiert? Sie können sich Online anmelden auf unsere Website [www.bron.ch](http://www.bron.ch) unter [broncolor/Lighting/Workshops](#)

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