

# Grafit A RFS

The high-end classic



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# Grafit A RFS

## The high-end classic

We have supplied the Grafit RFS power packs for 10 years, with continued success. It has become the benchmark by which all others are compared. An extremely large control range and free asymmetry, complete control of colour temperature and flash duration as well as easy operation and programming, even for complex lighting setups. These features make the Grafit A RFS the first choice of every photographer who does not want to make any compromises in terms of creative light design.



**Grafit A2/A4 RFS**

### CONTROL RANGE AND ASYMMETRY

The Grafit A RFS power packs are characterised by a very large control range. Almost 8 full f-stop levels allow the photographer to position the lamp very close to the model or subject, and still be able to work with a wide open aperture. On the other hand, higher outputs can provide illumination for the most demanding of large-scale projects or situations.

The control range of a Grafit A2 RFS is from 15 to 1600 joules, and that of a Grafit A4 RFS from 30 to 3200 joules. Thereby, in each case the Grafit deals with a contrast of more than 1:100. Over the entire output range, there are up to 7 full f-stop levels available between the three

independent lamp outlets. the 3 independent lamp outlets. This asymmetry is completely colour corrected up to an output difference of 4 whole f-stop levels.

### FLASH DURATION AND COLOUR (CTC)

When only one lamp is in use (or several with an asymmetry of three or less f-stops), the entire control range of the Grafit A RFS power packs is completely colour corrected. The patented CTC (Colour Temperature Control) process calculates, in dependence of the selected output, the optimal relation between capacitor voltage and flash duration. The result being, that when working with less power, the flash impulses



become extremely short, whilst the colour temperature remains consistent over the entire control range. A total flash duration  $t_{0.1}$  up to  $1/7500$  can be achieved; this corresponds to a  $t_{0.5}$  of around  $1/12000$ !

Furthermore, it is possible to deliberately modify this optimal flash time for neutral colour rendition. If a flash is programmed which is shorter than was calculated, the colour temperature shifts to a cooler tone, otherwise it is warm. Thus, various light shapers in the setup can be very precisely coordinated, or intentional colour shifts can be created in the picture. The flash duration (and also the dependent related colour temperature) can be exactly influenced. With flash times in the range of  $1/85$

to  $1/7500$  sec ( $t_{0.1}$ ), pictures of moving subjects or models can be shot either pin sharp or also with an accurately defined degree of sharpness of movement.

#### **EASY OPERATION**

The most important functions required in the daily routine of a photographer are directly accessible on the clearly arranged front panel: output selection, photocell, infrared receiver, modelling light and test release, all have their own illuminated keys which can easily be read even in darkness. The power output of each individual lamp outlet or all three lamp outlets can be adjusted simultaneously. Brief pressure on the key alters the output by  $1/10$  of an f-stop, longer pressure by a

whole f-stop interval. Should the power of all the connected lamps be altered with the main energy selector, the set relative output difference (i.e. the contrast) will be retained, only the total brightness will alter.

# Grafit A RFS

## The highlights at a glance

**Grafit A RFS offers a complete range of performance features unavailable with other power pack.**

1

### **Output of each lamp can be selected individually**

Each of 3 lamps can be adjusted independently of the other connectors, i.e. the unit behaves as if it were three independent power packs.

2

### **Wide control range**

6 7/10 f-stops on outlets I and II.

3

### **CTC technology (Colour Temperature Control)**

for consistent or deliberately controllable colour temperature.

4

### **Electronic stabilization of the colour temperature**

A patented system matches flash intensity and duration, guaranteeing uniform light distribution and colour temperature for every shot over the 6 7/10 f-stops on outlets I and II.

5

### **Control of intensity and flash duration**

The shortest possible flash duration for a particular defined output can be calculated.

6

### **User-friendly operation**

Controllable directly from the pack, camera or PC or Mac system.

7

### **Selectable flash duration**

With minimum duration of 1/7500 s (t.01) or 1/10'000 (t0.5).

8

### **Flash delay**

Adjustable almost steplessly from 0.01 to 50s.



# 9

## Extremely short charging time

Depends on the output, for example 0.03 s at 1.3 s max. for 1600J (at 230V).

# 10

## Proportional modelling light

Additional proportionality levels «Prop 4» and «Prop 5» allow to use a high modelling light setting even at low flash energy. At «Prop max.», the modelling light for the lamp with the highest flash energy operates at full output when working with only a single power pack. The other two lamps are graduated proportionally as defined by their power settings.

# 11

## High output

Grafit A2 RFS: 1600 J / f-stop 64 2/10 in 2 m (6 1/2 ft) distance. 100 ISO, reflector P70.

Grafit A4 RFS: 3200 J / f-stop 90 2/10 in 2 m (6 1/2 ft) distance. 100 ISO, reflector P70.

# 12

## Internal discharge when power is reduced

To relieve stress on power pack and flash tube.

# 13

## Additional functions

Memory function: The complete power pack settings can be stored at the press of a button, and retrieved later (4 settings when operating from Mac/PC); triggering delay from 0.01s; stroboscopic effects; choice of the LCD display language, etc.

# 14

## Illuminated LCD display and keypads

To ensure the operation even in a darkened studio.

# 15

## Flash energy display in joules or percentage

The flash energy of each lamp is displayed in joules or percentage.

# 16

## Two-channel infrared triggering

Units can be triggered using the IRX2 infrared trigger in addition to RFS, sync cable and cell.

# 17

## Durable

Efficiency and reliability is the key, and the backbone of all broncolor products.

# 18

## Compact

Small dimensions and light weight.

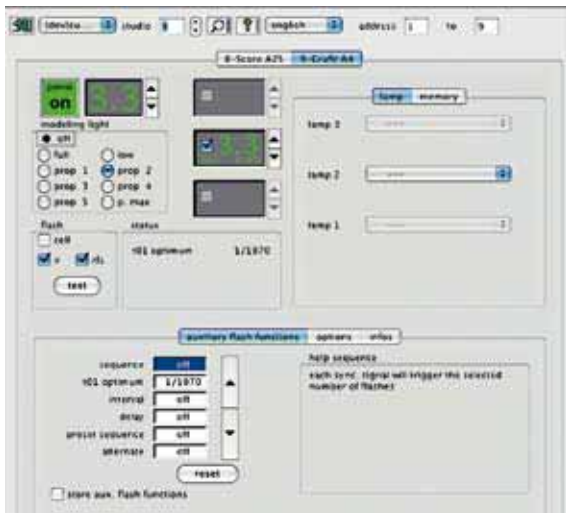
## Version «plus»

Because of the laws in some countries, the use of the broncolor radio system is not allowed. Therefore the broncolor power packs RFS version are also available in the version «plus» (that means with cable remote control). For the owners of Grafit A2 and Grafit A4 power packs, a conversion kit is available for conversion to Grafit A2 plus / A4 plus. This consists of interface, adapter cable and CD with software.



## RADIO FREQUENCY SYSTEM (RFS)

Every Grafit A RFS power pack function can also be wirelessly remote controlled via the broncolor RFS transceiver from Mac or PC. All the functions are displayed in a clearly arranged window on your screen; and they can be set simply with a mouse click. Even without computer – only with the camera transceiver – all the power packs can be synchronously triggered and even varied in power – everything comfortably and directly from the camera.



📷 || PETER HEBEISEN, CH

## FOUR TIMES SYNCHRONISED

The Grafit A RFS power packs can be triggered in no less than 4 different ways. The 'classic' sync cable is the easiest option. This way of synchronisation reacts the fastest, and is therefore recommended for work in the area of the shortest possible synchronisation speed that your camera offers. If one of several power



packs is triggered by cable, all the others will become synchronised via the built-in photocell. When the Grafit A RFS power packs are triggered via infrared, two independent channels are available. The set channels at the unit and camera transmitter IRX2 must correspond, to ensure flash release. Therefore, work can take place at 2 different workstations,

in close proximity, independently of one another without infrared signals inadvertently triggering or changing the photographers' settings.

All Grafit A RFS power packs are also equipped with an RFS receiver. Up to 10 independent power pack channels can be triggered from a very compactly built camera transmitter, and even

varied in power output. Flash synchronisation via RFS usually functions in closed rooms up to a distance of 30 m, however the range can be extended without problems up to 300 m. Even thin walls and disturbing ambient light (fluorescent lamps or direct incident sunlight) can no longer cause inadvertent triggering of the Grafit power packs.

### COMPATIBILITY

All Grafit A power packs are integrated in the broncolor system with proportional modelling light. 5 different proportionality levels let the modelling light always appear proportional to the flash output, even when operating with other broncolor power packs and/or monolights. Thereby, the entire brightness can be varied, the contrast and thus the light mood always correspond to that which is expected in the final image. One may also let the modelling light burn on full power or on a lower level, independent of the set flash energy, and, of course, it may be turned off completely. Grafit A fulfils every wish in respect of compatibility with other power packs and all the lamps of the broncolor product line. All units produced since 1972 (and of course the entire broncolor current lamp program) are compatible with the Grafit A RFS without limitations.

### SPECIAL FUNCTIONS

With the Grafit A RFS, innumerable special functions are at the photographer's disposal. Limitations in light design and thus creativity are, at long last, a thing of the past.

Sequences and interval control allow stroboscopic effects with up to 30 flash discharges within a half second.

Flash triggering delay can be set to precisely 1/100 sec, and alternating release of the power packs (ping-pong effect) allows even faster image sequences.

These and many more functions, together with the possibility to modify flash duration and colour temperature, are factors which determine every creative photographer's success.



# broncolor System

## POWER PACKS



Scoro A4S  
31.043.XX  
Scoro A2S  
31.041.XX

Scoro A4  
31.042.XX  
Scoro A2  
31.040.XX



Grafit A2 RFS  
31.169.XX  
Grafit A4 RFS  
31.179.XX



Verso A2 RFS  
31.031.XX  
Verso A4 RFS  
31.033.XX

Power Dock  
for Verso A2 / A4 RFS  
36.124.00

Mobilite A2R  
31.011.XX

## LAMPS



Pulso G  
32.115.XX 1600 J  
Pulso G  
32.116.XX 3200 J

Unilite  
32.113.XX 1600 J  
Unilite  
32.114.XX 3200 J

Pulso Twin  
32.117.XX

Pulso 8  
32.118.XX

Picolite  
small lamp  
32.021.XX  
Mobilite 2  
small lamp  
32.012.00

Reflectors are not included

## EFFECT LAMPS

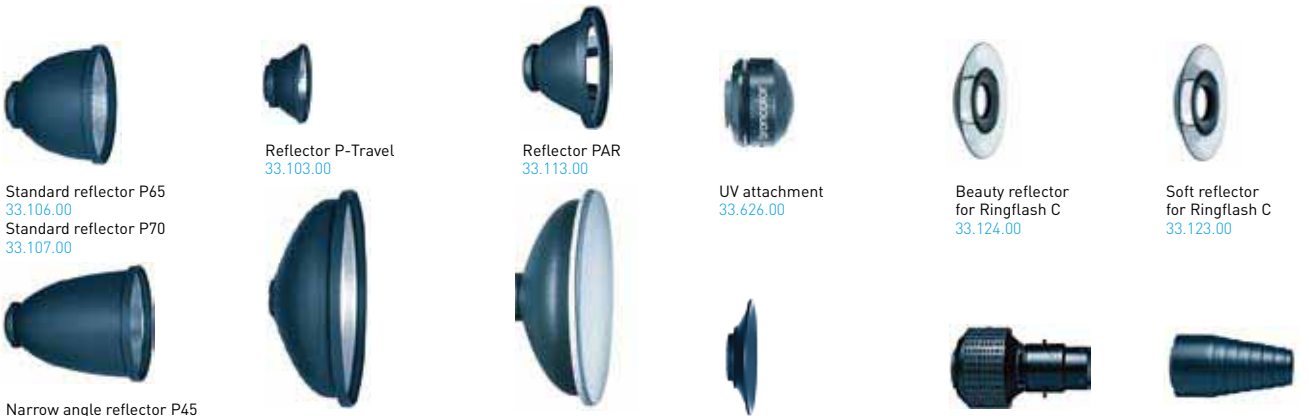


Ringflash C  
32.462.XX  
Ringflash P  
32.461.XX

Litestick  
32.451.00

Balloon  
33.161.00

## REFLECTORS AND ATTACHMENTS



Standard reflector P65  
33.106.00  
Standard reflector P70  
33.107.00

Reflector P-Travel  
33.103.00

Reflector PAR  
33.113.00

UV attachment  
33.626.00

Beauty reflector  
for Ringflash C  
33.124.00

Soft reflector  
for Ringflash C  
33.123.00

Narrow angle reflector P45  
33.104.00  
Narrow angle reflector P50  
33.105.00

Softlight reflector P  
33.110.00

Beauty Dish  
with shower cap  
33.111.00

Wide angle reflector P120  
33.112.000

Spot attachment  
33.640.00

Conical snoot  
33.120.00

## SPECIAL REFLECTORS



Satellite Staro  
33.151.00

Satellite Evolution  
33.150.00

Mini-Satellite  
33.152.00

Para 170 FB  
33.484.00

Para 220 FB  
33.485.00

Para Soft 220 FB  
33.487.00

Para 330 FB  
33.486.00

Stands are not included



Topas A2 RFS  
31.173.XX  
Topas A4 RFS  
31.174.XX

Topas A8 Evolution / RFS  
31.184.XX / 31.183.XX



Nano 2  
31.151.XX  
Nano A4  
31.172.XX

MONOLIGHTS



Minicom 40 / RFS  
31.405.XX / 31.406.XX

Minicom 80 / RFS  
31.415.XX / 31.416.XX

Minipuls C200  
31.449.XX

Reflectors are not included

BATTERY UNIT



Powerbox 900  
56.302.00



Boxlite 40  
32.341.XX



Picobox  
33.128.00



Lightbar 120 Evolution  
32.353.XX  
Lightbar 60 Evolution  
32.351.XX



Striplite 120 Evolution  
32.303.XX  
Striplite 60 Evolution  
32.301.XX



Hazylight-Soft  
33.513.00



broncolor Floorer  
32.431.00



Pulso-Spot 4  
32.425.XX

SPECIAL ACCESSORIES



Transmitter RFS  
36.130.00



Transceiver RFS  
36.131.00



Infrared transmitter IRX 2  
36.116.00



Optical snoot 150 mm  
for Pulso-Spot 4  
5500 K: 33.620.55  
5900 K: 33.620.59



Pulso adapter  
for Mobilite 2 / Picolite  
33.501.00



Projection attachment  
for Picolite  
33.641.00



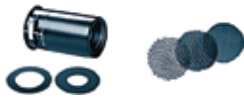
Barn door with 4 wings  
for P 65, P 45 and PAR  
33.246.00  
Barn door with 4 wings  
for P 70  
33.247.00



Barn door with 4 wings  
for Mobilite 2 / Picolite  
33.244.00



Honeycomb grids for Ringflash C,  
set of 3 pcs.  
33.219.00



Attachment with 3 honeycomb grids and  
2 aperture masks for Mobilite 2 / Picolite  
33.204.00



Fresnel spot attachment  
for Mobilite 2 / Picolite  
33.631.00



Barn door with  
2 wings for P 70  
33.227.00



Sunlite-Set  
33.162.0



Honeycomb grids set of 3 pcs.  
33.205.00 for P50  
33.206.00 for P65, P45 and PAR  
33.211.00 extra narrow for P65, P45 and PAR  
33.207.00 for P70

SOFTBOXES



Pulsoflex C  
35 x 120  
[14 x 48"]  
33.444.00



Pulsoflex C  
60 x 100  
[24 x 40"]  
33.443.00



Pulsoflex C  
70 x 70  
[28 x 28"]  
33.441.00



Pulsoflex C  
80 x 140  
[32 x 56"]  
33.446.00



Pulsoflex C  
100 x 100  
[40 x 40"]  
33.442.00



Pulsoflex C  
150 x 150  
[60 x 60"]  
33.445.00

Adapter ring and stands  
are not included

UMBRELLAS



33.459.00 Silver Ø 82 cm [32.3"]  
33.452.00 Silver Ø 102 cm [40.2"]  
33.454.00 Transparent Ø 102 cm [40.2"]  
33.460.00 White Ø 82 cm [32.3"]  
33.453.00 White Ø 102 cm [40.2"]  
33.496.00 Umbrella reflector



Pulsoflex EM  
30 x 110  
[12 x 44"]  
33.424.00



Pulsoflex EM  
35 x 60  
[14 x 24"]  
33.415.00



Pulsoflex EM  
40 x 155  
[16 x 62"]  
33.425.00



Pulsoflex EM  
50 x 50  
[20 x 20"]  
33.406.00



Pulsoflex EM  
55 x 95  
[22 x 38"]  
33.416.00



Pulsoflex EM  
80 x 140  
[32 x 56"]  
33.417.00



Pulsoflex EM  
80 x 80  
[32 x 32"]  
33.407.00



Pulsoflex EM  
110 x 110  
[44 x 44"]  
33.408.00

**broncolor**  
THE LIGHT

# Technical data

## Grafit A2 RFS / Grafit A4 RFS



**Grafit A2 RFS / 31.169.XX**

**Grafit A4 RFS / 31.179.XX**

<b>Flash energy</b>		1600 J	3200 J
<b>Flash duration t0.1 (t0.5)</b>		1/150 - 1/7500 s (1/450 - 1/12000 s) Flash duration and energy automatically regulated for optimum colour temperature. Flash duration can be preselected.	1/80 - 1/7500 s (1/240 - 1/12000 s)
<b>f-stops in 2 m (6 1/2 ft) distance, 100 ISO, reflector P70</b>		64 2/10	90 2/10
<b>Charging time (for 100 % of selected energy)</b>	<b>230 V</b> <b>120 V</b> <b>100 V</b>	0.03 - 1.3 s 0.03 - 1.6 s 0.03 - 2.2 s Can be switched to slow charging mode for low-amperage power outlets	0.04 - 2.6 s 0.04 - 3.2 s 0.04 - 4.4 s
<b>Ready display</b>		Visual and audible (can be switched off), signals when 100 % of selected energy is reached.	
<b>Lamp connections</b>		2 main connections with flash cut-off and 1 reserve connection	
<b>Power output distribution</b>		Symmetrical and variable asymmetrical	
<b>Control elements</b>		Illuminated silicone keyboard, resistant to dust and scratches.	
<b>Control range</b>		6 7/10 f-stops for main connections, 4 f-stops for reserve connection in 1/10 or 1/3 f-stop intervals. Display simultaneously in joules and f-stops, joules switchable to percentage	
<b>Colour temperature</b>		CTC-technology (Colour Temperature Control) for constant or deliberately variable colour temperature over the entire control range	
<b>Modelling light</b>		Halogen max. 3 x 650 W at 200-240 V, Halogen max. 3 x 300 W at 100-120 V Proportional to flash energy and «full» and «low» settings. Proportionality adjustable to other broncolor power packs, monolights and their various output levels.	
<b>Additional functions</b>		Flash sequences, triggering delay, selectable flash duration, slow charging, ping-pong release, stroboscopic effects with one or more power packs, a choice of two infrared channels etc. User-friendly menu control, menu text available in multiple languages (German, English, French, etc.)	
<b>Flash release</b>		Manual release button, photocell (can be switched off) infrared receiver (can be switched off), sync cable, FCM 2, IRX2, IRQ, Transmitter RFS	
<b>No. of sync sockets</b>		1	
<b>Stabilized flash voltage</b>		+/- 0.5 %	
<b>Power requirements</b>		200-240 V/50 Hz, switchable to 120 V/60 Hz, current consumption 10 A, longer series with shorter charging time 16 A. 110-120 V / 60 Hz, switchable to 230 V/50 Hz, current consumption 15 A.	
<b>Dimensions</b>		288 x 180 x 311.5 mm / 11.3 x 7 x 12.2"	288 x 180 x 407.5 mm / 11.3 x 7 x 16"
<b>Weight</b>		8 kg / 17.6 lbs	11 kg / 24.2 lbs

Subject to change in the interest of technical development.

Grafit RFS power packs are the result of many years of broncolor experience and cutting-edge technology. To allow the customers to benefit from future advances, broncolor offers a software update service through your broncolor dealer for the entire service life of your Grafit RFS power packs. Carefully selected components and robust design guarantee maximum reliability even under difficult conditions. We offer a 2-year factory warranty. broncolor power packs: your best investment for the future.

Made in Switzerland.

**broncolor**<sup>®</sup>  
THE LIGHT

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