



Scoro A new chapter in light control

In the digital age, creativity is the critical factor determining any photographer's success.

With the new Scoro power packs, you can let your artistic imagination run free. With their uniquely convenient control systems, you can deal with even the most complex lighting setups easily every time. No other flash system gives you so much creative capability – and no other holds so many world records.

THE UNDISPUTED CHAMPION

A recharging time of 0.6 s at 1600 joule and 0.4* s at 1200 joule, a 10 f-stop control range with stable colour temperature, adjustable colour temperature (at 200 K intervals), and three independent channels with exactly the same colour temperature - with Scoro, broncolor has set no fewer than four new world records, and remains the industry benchmark in modern flash technology. With its versatile and unparalleled capabilities for power distribution with consistent light quality, this new power pack is the ideal light source for digital photography.

UNLIMITED CREATIVITY

With its unique combination of functions, you can quickly and easily implement your lighting ideas:

- Flash duration is calculated for the power level that you set.
- Colour temperature can be precisely maintained but also deliberately modified.
- The power output of each lamp can be individually controlled over 11 f-stop levels resp. 10 full f-stop intervals. This corresponds to power output of 3200 to 3 J (!).
- The power range has been expanded for digital photography, and exceeds all existing technologies.
- You can also select from a comprehensive spectrum of lamps and accessories, and a lot more.



« We give your vision room to grow.»

You can select any power level you want, over 10 f-stop levels or 9 f-stop intervals with Scoro A2 (1600 J) and over full 11 f-stop levels or 10 f-stop intervals with Scoro A4 (3200 J). In joules this corresponds to a control range of 3200 to 3 J with Scoro A4 and A4S. The adjustment interval is one-tenth of a stop in whole f-stops, and is accurately calculated using digital technology. The flash energy of each connected lamp can be displayed either in joule or as a percentage. Total flash duration t0.1 can be set from 1/150 to 1/8000 s for Scoro A2, and in a range from 1/85 to 1/8000 s for Scoro A4. The value for t0.5 is 1/12000 s.

USER-FRIENDLY AND RELIABLE

Even with all its functionality, the Scoro user interface is simple and self-explanatory. The graphic LCD display in the bottom part is completely new: you can use it to program functions such as modelling light proportionality, flash duration, flash delay, memory, or fine-scale colour temperature adjustment. The menu system is very logically organised, indicating the available settings for each function. Scoro also leaves nothing to be desired in terms of reliability. The blueilluminated silicone keypad and the digital display are easy to read even in a dark studio, which not only reduces operator errors but also gives you a constant readout of selected power levels. Wearfree keypads replace rotary knobs and switches to improve functional reliability over many years of use. The auxiliary programs are particularly useful, explaining the various functions and supplementary functions directly on the unit at the touch of a button - in any of ten languages.

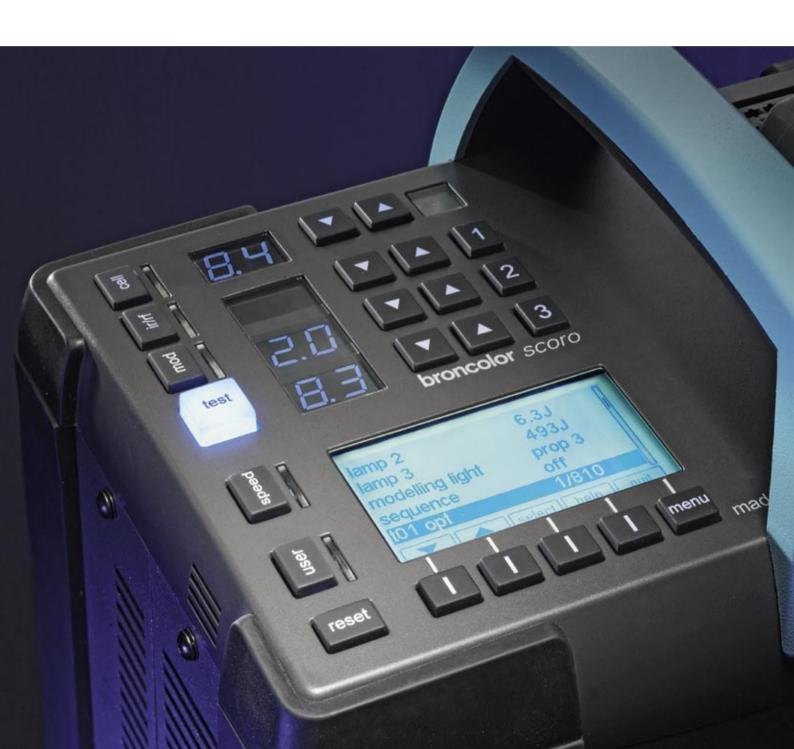
RADIO REMOTE CONTROL AND TRIGGERING

Every Scoro function can be controlled from the digital workstation using the radio remote control. The power pack can be triggered by radio at distances of up to 300 m. All Scoro power packs also include an infrared receiver, and can be remotely controlled and triggered wirelessly. The antenna is built into the handle. Remote control allows Scoro power packs to be ceilingmounted in order to optimise available working space on the studio floor.

FOR MAC AND PC

Scoro is convenient because it lets you enter all your lighting corrections directly on the computer screen. You can control all power pack functions from your Mac or PC via the radio interface, supported by user-friendly software. Four memory locations are available for storing lighting configurations. All settings can be stored with the press of a key and retrieved whenever you need them, so that your clients can view and select from a number of lighting situations. In addition, every lamp is identifiable and can be given an address for each function. The memory locations are also available, of course, even without computer control.

«New opportunities have opened up.»



10 CHANNEL SYSTEM

With the broncolor triggering system, ten different workstations in the same studio can flash independently of one another. The ten-channel design eliminates any possibility of inadvertent triggering or changes to the settings of power packs at the other workstations.

PERFECTLY COMPATIBLE

Scoro is a logical development of broncolor's flash technology, and fits seamlessly into the existing broncolor studio range, which includes comprehensive lighting accessories for photo studios from a variety of lamps and light shapers to filters, honeycomb attachments, stands, and even remote control and radio triggering systems. Scoro is compatible with all these components, but also with all other broncolor power packs. And of course in many countries there are wellstocked, expert broncolor distributors and service locations for all our products. An overview of the entire product line is provided in the broncolor system catalogue and constantly updated on our web site: www.broncolor.com

A LONG-TERM INVESTMENT

Scoro is the «Top-of-the-line» flash system from Bron Elektronik AG, the world-famous Swiss manufacturer. It represents not only lasting value, but also an investment in your own future. Using a new generation of high-power transistors and ultramodern microprocessor technology, Bron Elektronik AG has succeeded in developing an affordable unit with an impressive performance résumé. Years from now, it will still keep you at the cutting edge. Scoro power packs are also designed throughout with quality in mind, just like all broncolor products. This becomes particularly evident in demanding continuous service on large-scale assignments with fast flash sequences. Every power pack can put out thousands of flashes a day without compromising the integrity of the capacitors.

«With Scoro you can redefine the light.»



Scoro 15 highlights open you new opportunities.

Scoro offers a combination of features that no other compact power pack can match. Always easy to use and uniquely convenient, your Scoro gives you unlimited creative capabilities. Here are just a few of its outstanding advantages:

1

Individual power distribution

Scoro functions like three power packs in one: the power output of each of the three lamp outlets can be adjusted independently.

levels or 6 f-stop intervals. That guarantees uniform light distribution and colour temperature for every shot – another unique Scoro feature.

2

Maximum convenience

Scoro can be controlled either via menus using the cursor on the front panel, or directly from a Mac or PC. Power levels are set in each channel with a direct +/-keystroke, and adjustment options are displayed in the menu along with each function

4

Controlling intensity and flash duration

The shortest possible flash duration can be calculated for a given power setting. This corresponds for all Scoro units 1/8000 (t0.1) or 1/12000 (t0.5). The flash duration can also, however, be deliberately lengthened (to as long as $1/85 \, \mathrm{s}$) to produce controlled motion effects.

3

Guaranteed true colour

The colour temperature at every outlet is electronically stabilised. The patented, expanded Enhanced Colour Temperature Control (ECTC) process, which coordinates flash voltage with flash duration, produces a consistent colour temperature over the entire 10 f-stop levels or 11 f-stop intervals through all three lamp outlets. In asymmetry up to 7 f-stop

5

Extremely short recharging times

Recharging times depend on power output, ranging from $0.03\,\mathrm{s}$ to a maximum of $1.1\,\mathrm{s}$ for Scoro A2 at $1600\,\mathrm{J}$, and $0.02\,\mathrm{s}$ to $0.6\,\mathrm{s}$ for Scoro A2S at $1600\,\mathrm{J}$. In «speed» mode the charging time is even reduced with Scoro A2S to $0.4\,\mathrm{s}$.

6

Radio Frequency System (RFS)

The power pack can be controlled by radio from the computer using the built-in 10-channel RFS interface (up to 20 units per channel, and four memory locations for lighting configurations). The range is up to 300 m, or up to 100 m indoors.

7

Colour control

The extended, patented ECTC function guarantees colour stabilisation over the complete range. In steps of +/- 200 K it is possible to control the colour deliberately and precisely.

8

Supplementary functions

With the memory function, all settings can be stored in their entirety with the push of a button. Other supplementary functions: triggering delay (0.01 s or longer), stroboscopic effect, selectable language, etc.

9

Multilingual

The menu system and the help texts in the LCD display can be presented in any of 10 languages.

10

«speed» function

Just push a button to turn your studio power pack into a super-fast flash unit for fashion photography. When the «speed» button is pushed, total energy is optimised to 1200 J (A2) or 2400 J (A4), offering the world's shortest recharging times (0.4 s at 1200 J). That lets you fire 160 flashes per minute at full power!

11

«User» function

The so-called «user» function may be compared to different computer screens i.e. several users have independent setting possibilities.

12

Illuminated LCD displays and keys

The backlighting system lets you control everything even in a dark studio, and can be dimmed if necessary.

13

Durable

Scoro power packs are carefully designed for quality, even in demanding continuous use for fashion shoots with rapid flash sequences. The housing is made of metal, with protective rubber bumpers. The feet of the unit function as shock absorbers.

14

Compatible

Scoro power packs are compatible with most lamps in the broncolor product line produced since 1972.

15

Made in Switzerland

Every broncolor unit is endowed with more than 50 years of experience in the design of high-quality products for professional photographers. broncolor products are developed and manufactured in Switzerland.

Scoro

Uncompromisingly good

Relying on high-performance components as well as modern production technologies, and leveraging more than 50 years of know-how, we have created an innovative light management tool with no compromises in terms of quality.

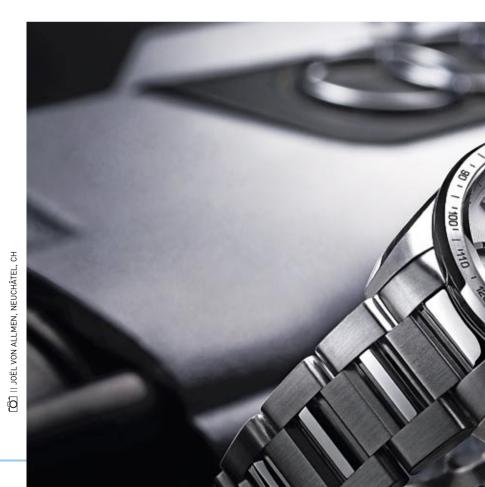
broncolor has always concentrated on the needs of professional photographers, so we are constantly consulting and working together with well-known photographers and studios. Every new broncolor product is tested by expert photographers and developed to full release readiness under the toughest possible real-world conditions. That is your guarantee that your broncolor equipment will meet the highest standards.

SUBTLE LIGHTING EFFECTS ON DEMAND

The enormous adjustment range 11 f-stop levels or 10 f-stop intervals in 1/10 f-stop intervals at every outlet is unique. It also means that the lowest possible flash energy (3 J) is less than 0.1% of the total power pack energy (3200 J for Scoro A4), so that even the subtlest effects can be perfectly adjusted. The quantity of light can be regulated, individually and with perfect precision, for each lamp. The control range is wide enough, with 10 full f-stop intervals in terms of both asymmetry that highlights and shadows can be easily controlled. Until 6 to 10 f-stops asymmetry is completely colour corrected.

ULTIMATE LIGHT QUALITY

Light quality depends both on the quality of the light shaper being used and on the light-controlling precision of the power pack. With Scoro units,



flash voltage is regulated to within +/-0.5%. The flash duration is also monitored to within microseconds. This previously unattainable repeatability is particularly important for electronic image acquisition using multi-shot cameras. If the quantity of light for the three exposures is not 100% identical, colour shifts or «checkerboard» effects will occur. The new Scorospecific methodology provides a consistent colour temperature for all three channels even if light quantities are different – and even with an asymmetry of up to 6 f-stop intervals.

INDIVIDUAL POWER DISTRIBUTION

Scoro units have three lamp outlets. Each one has an indivi-

dual power controller with LED display, adjustable independently of the other outlets. The unit therefore behaves like three independent power packs. An additional power display indicates the total energy delivered from the power pack; it also indicates how much latitude is available for variation, and simultaneously displays the power distribution of all the outlets for combined exposure correction.

IMPROVED HALOGEN MODELLING LIGHT

Scoro offers real-world solutions for the modelling light, too. The modelling light is automatically proportional over the entire power output range. In addition to the familiar prop 1, prop 2, and prop 3 proportionality levels, Scoro takes an important step forward with prop 4 and prop 5, so that you can work with a bright modelling light even at low flash energy levels. Scoro also offers an additional proportionality step, prop max, for when you want to work with only a single power pack. At this setting, the modelling light in the lamp with the highest flash energy operates at full output. All the other lamps are proportionally dimmed in accordance with their proportionality setting. That means the modelling light can be operated at high output even at reduced flash energy levels, but still stays proportional to the flash. An automatic ramp-up function lessens stress on the halogen



modelling light. To decrease loads on poor-quality mains systems, the modelling light can be automatically dimmed during the recharging operation; this also serves as a visual flash firing indicator and charge monitor.

THE LONG AND THE SHORT OF IT

Flash duration and light output are two critical light management variables. Only Scoro lets you instruct the microprocessor to calculate the shortest or longest possible flash duration for the power output you have set, enabling rapid flash sequences at intervals of only 0.02 s (Scoro A2S and Scoro A4S). The t0.1 flash duration can be selected from 1/85 to 1/8000 s (for t0.5 the value is 1/12000 s), so you can articulate motion sequences, eliminate blurred contours, and achieve special effects. Fixed values for the flash duration can, of course, also be predefined, or you can let the computer calculate the ideal flash duration for an optimum colour temperature.



O II DAN TOBIN SMITH, LONDON, GB



SELECTABLE FLASH DURATION

The flash duration is an essential criterion for evaluating a power pack. It corresponds to the ability to select any shutter «speed» when photographing in bright daylight. Although calculations are usually performed with the t0.5 effective flash duration. broncolor - in the interest of maximum precision prefers the t0.1 total flash duration. That's because, especially when a fast-moving subject needs to be "frozen," the light intensity after the t0.5 effective flash duration is still 50%, which is often too much. Flash durations for the Scoro power packs are therefore always defined on the basis of the t0.1 total flash duration.

RELIABLY RELIABLE

Scoro power packs also make no compromises when it comes to functionality and operating reliability. The highest possible quality standards are applied to every component, guaranteeing that selected output values and flash times are exactly right with every flash. Scoro therefore provides outstanding repeatability for long series of exposures, for example in multi-shot situations. Scoro power packs discharge internally when output is reduced, and do not require unnecessary flash firing. The temperature of all important power pack parts is continuously monitored by processor-controlled calculation, protecting the power pack from overheating and optimising its service life. Incorrect exposures caused by failure of a flash tube are detected by the flash firing monitoring system and indicated acoustically or visually, saving you time and unnecessary cost for reshooting.

CONSISTENT COLOUR TEMPERATURE

Scoro is the only studio flash system that maintains colour temperature over the entire power output range (without time settings), and can modify it on demand at constant output in steps of +/- 200 K. Another outstanding advantage of Scoro is electronic stabilisation of colour temperature on all three outputs. You can repeat entire series of shots under identical conditions, or explore new creative ideas by deliberately modifying the colour temperature. With Scoro, you define the light.

FASHION SHOOTING

Pushing the «speed» button reduces the maximum flash energy by 25%: thanks to the flash cutoff, the recharging time and flash duration decrease much more quickly than with conventional power packs. For example, you can shoot 5 images in 2 seconds with full power. This makes Scoro an ideal flash unit for fashion photography, with fan cooling so it can effortlessly withstand even long series of flashes.

«Achieve more with less energy.»



50 FLASHES PER SECOND

Scoro A2S can operate at optimum colour temperature and full power at its minimum recharging time of 0.4 s. This corresponds to a fraction of ordinary recharging times. With Scoro, stroboscopic images can be produced using only one flash unit, for example in order to visualise motion sequences in technical and scientific photography. Up to 50 flashes per second are possible. And if multiple power packs are triggered alternately, the number of flashes per second is doubled.

DIGITAL PHOTOGRAPHY

With power output regulated in 1/10 f-stop intervals, Scoro is the ideal studio flash for digital photography. Precise control of colour temperature and light quantity prevents colour shifts when multiple flash «pops» are

required for large image files. You can count on the same light quality every time. The Scoro can be controlled directly from your Mac or PC, making it the indispensable flash unit for digital images.

O] II HOWARD SCHATZ, NEW YORK, USA

«Let your
creativity
run free.»

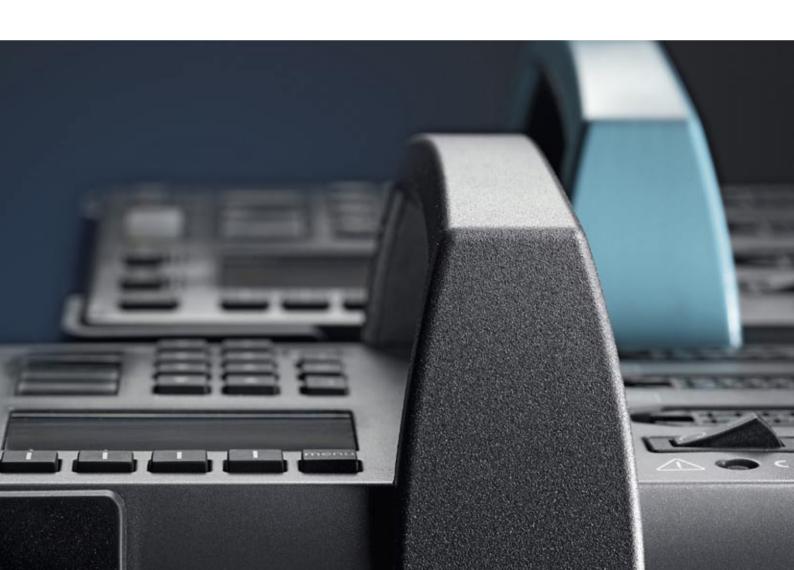


Scoro A and AS The subtle differences

The Scoro power packs are available in the two versions A (anthracite coloured handle) and AS (blue handle).

Whilst Scoro A power packs are optimally operated with a mains voltage of 220-240 V, a special power unit on the AS version allows worldwide use. The AS units work with all voltages from 100-240 V. An additional difference con-

cerns the charging time. The Scoro A2 needs 1.1 s at full power. The A2S rated 1600 joules is ready after 0.6 s. In the «speed» mode, the charging time can even be reduced to an unbelievable 0.4 s. That makes the Scoro AS is the fastest power pack in the world. All other parameters such as flash duration (t0.1), colour stabilisation, etc., are identical in both versions.



Technical data SCORO A2 / SCORO A4





		Scoro A2	Scoro A4	
Flash energy («speed» mode)		1600 J (1200 J)	3200 J (2400 J)	
Flash duration t0.1 at full power («speed» mode)		1/265 s (1/535 s)	1/132 s (1/285 s)	
Flash duration t0.1 (t0.5)		1/150 - 1/8000 s (1/450 - 1/12000 s) Flash duration and energy automatically regulated for optimum colour temperature. Flash duration can be preselected.		
f-stops in 2 m (61/2 ft) distance reflector P70	, 100 ISO,	64 2/10	90 2/10	
Charging time («speed» mode) min max. energy	230 V 120 V 100 V	0.03 - 1.1 s (0.03 - 0.7 s) with reservations with reservations	0.03 - 2.2 s (0.03 - 1.3 s) with reservations with reservations	
Ready display		Visual and audible (can be switched off), signals when 100 % of selected energy is reached.		
Lamp outlets		3 outlet which can be switched off		
Power distribution		Symmetrical and individual asymmetrical		
Control elements		Dust and scratch–resistant, illuminated silico control	ne keyboard, settings possible with remote	
Control range		over 9 f-stop intervals In 1/10 or entire f-stops intervals. LCD display percentage.	over 10 f-stop intervals in joules switchable to	
Colour temperature		ECTC technology (Enhanced Colour Temperature Control) for constant, respective specific changeable colour temperature		
Modelling light		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 and monolights and their various output ratings.		
Additional functions		Sequence, delay, interval, t0.1, colour temperature, alternate, strobo, memory, etc.		
Flash release		Manual release button, photocell may be switched off, IR receiver may be switched off, sync cable, IRX2, RFS		
No. of sync sockets		1		
Computer connection for remote control		1		
Stabilized flash voltage		+/- 0.3 %		
Power requirements	230 V 120 V 100 V	16.0A 15.0A 15.0A		
Dimensions without handle		288 × 190 × 295 mm / 11.3 × 7.5 × 11.62"	288 × 190 × 400 mm / 11.3 × 7.5 × 15.7"	
Dimensions with handle		288 × 190 × 348 mm / 11.3 × 7.5 × 13.7"	288 × 190 × 453 mm / 11.3 × 7.5 × 17.8"	
Weight		8.1 kg / 17.8 lbs	11.3 kg / 24.9 lbs	

Technical data SCORO A2S / SCORO A4S





		Scoro A2S	Scoro A4S	
Flash energy («speed» mode)		1600 J (1200 J)	3200 J (2400 J)	
Flash duration t0.1 at full power («speed» mode)		1/265 (1/535 s)	1/132 (1/1/285)	
Flash duration t0.1 (t0.5)		1/150 - 1/8000 s (1/450 - 1/12000 s) Flash duration and energy automatically regulated for optimum colour temperature. Flash duration can be preselected.		
f-stops in 2 m (61/2 ft) distance, 100 ISO, reflector P70		64 2/10	90 2/10	
Charging time («speed» mode) min max. energy	230 V 120 V 100 V	0.02 - 0.6 s (0.02 - 0.4 s) 0.02 - 1.0 s (0.02 - 0.6 s) 0.02 - 1.1 s (0.02 - 0.7 s)	0.02 - 1.3 s (0.02 - 0.8 s) 0.02 - 2.0 s (0.02 - 1.2 s) 0.02 - 2.2 s (0.02 - 1.4 s)	
Ready display		Visual and audible (can be switched off), signals when 100 % of selected energy is reached.		
Lamp outlets		3 outlet which can be switched off		
Power distribution		Symmetrical and individual asymmetrical		
Control elements		Dust and scratch-resistant, illuminated silicone keyboard, settings possible with remote control		
Control range		over 9 f-stop intervals In 1/10 or entire f-stops intervals. LCD display	over 10 f-stop intervals in joules switchable to percentage.	
Colour temperature		ECTC technology (Enhanced Colour Temperature Control) for constant, respective specific changeable colour temperature		
Modelling light		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 and monolights and their various output ratings.		
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Flash release		Manual release button, photocell may be switched off, IR receiver may be switched off, sync cable, IRX2, RFS		
No. of sync sockets		1		
Computer connection for remote control		1		
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Dimensions without handle		288 × 190 × 295 mm / 11.3 × 7.5 × 11.6"	288 × 190 × 400 mm / 11.3 × 7.5 × 15.7"	
Dimensions with handle		288 × 190 × 348 mm / 11.3 × 7.5 × 13.7"	288 × 190 × 453 mm / 11.3 × 7.5 × 17.8"	
Weight		9.2 kg / 20.3 lbs	12.5 kg / 27.5 lbs	

Subject to change in the interest of technical development.

Scoro power packs from broncolor are the result of many years of experience and innovative technology. To ensure that you continue to benefit from future developments, we offer a software update service, via your broncolor distributor, for the entire service life of every Scoro power pack. Carefully selected components and sturdy construction guarantee the best possible reliability and functionality even under difficult conditions. We provide a two-year factory warranty.

Made in Switzerland.

LAMPHEADS





Grafit A2 / RFS Grafit A4 / RFS



Power Dock Verso A2 / RFS



Topas A2 / RFS Topas A4 / RFS Topas A8 Evolution / RFS



Mobil A2R



Nano A4



Minicom 40 / RFS

Minicom 80 / RFS

Minipuls C200

Verso A4 / RFS for Verso A2 / A4 / RFS



Lightbar 120 Evolution Lightbar 60 Evolution 32.351.XX



Striplite 60 Evolution



Hazylight-Soft 33.513.00



Pulso-Spot 4



ESSORIES

SPECIAL

Transmitter RFS



Infrared transmitter IRX 2

ECTORS AND ATTACHMENTS

Pulso G

Pulso G

Standard reflector P65 Standard reflector P70



REFL

Narrow angle reflector P45 Narrow angle reflector P50



32.113.XX 1600 J

Unilite

32.116.XX 3200 J 32.114.XX 3200 J 32.117.XX

Reflector P-Travel

Pulso Twin



Softlight reflector P 33.110.00



Pulso 8

Picolite small lamp

Mobilite 2

small lamp

Reflector PAR



Beauty Dish



Ringflash C

Ringflash P 32.461.XX



Wide angle reflector P120 33.112.00



Litestick

New soft reflector for Ringflash C



Spot attachment



Balloon

Boxlite 40

Optical snoot 150 mm 5500 K for Pulso-Spot 4



Conical snoot



Pulso adapter for Mobilite 2 / Picolite

Picobox



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



Projection attachment for Picolite



Fresnel spot attachment for Mobilite 2 / Picolite

 150×150



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



Barn door with 2 wings for P 70



Sunlite-Set

broncolor Flooter

Barn door with 4 wings for Mobilite 2 / Picolite



Honeycomb grids for Ringflash C,

Honeycomb grids for P 50, set of 3 pcs.

Honeycomb grids for P65, P45 and PAR, set of 3 pcs./Extra narrow Honeycomb grids for P 70, set of 3 pcs.



Satellite Staro

Satellite Evolution 33.150.00

Mini-Satellite

Para 170 FB

Para 220 FB

Para 330 FB

 35×120 $[14 \times 48"]$

Pulsoflex EM

30 × 110

 $(12 \times 44")$

Pulsoflex C Pulsoflex C 60 × 100

 $(24 \times 40")$

Pulsoflex EM

 35×60

 $(14 \times 24")$

 40×155

 $(16 \times 62")$

Pulsoflex C 70 × 70

(28 × 28")

Pulsoflex EM PulsoflexEM 50×50

 $(20 \times 20")$

Pulsoflex C 80 × 140

 $(32 \times 56")$

Pulsoflex EM 55 × 95 (22 × 38") $(32 \times 56")$

Pulsoflex EM 80×140

Pulsoflex C 100 × 100

 $(40 \times 40")$

Pulsoflex EM 80×80 110 × 110 $[32 \times 32"]$ $[44 \times 44"]$





Umbrella white Ø 82 cm (32.3")

Umbrella white Ø 102 cm (40.2")

Umbrella silver Ø 82 cm (32.3") Umbrella reflector Umbrella silver \varnothing 102 cm (40.2") Umbrella transparent \varnothing 102 cm (40.2")

broncolor www.broncolor.com

