RFS 2

Operating instructions | Bedienungsanleitung | Mode d'emploi

SCOPE OF DELIVERY

1 Case
2 lithium button cell
Li-Mn CR2450 (560 mAh, 3 V)
3 Display
4 USB socket
5 Sync in
6 Sync out
7 "test" key
8 Base plate (only with receiver kit)
9 "set" key (to set frequency and studio channel)
10 Keys "▲", "▼" (to regulate the flash energy and for adjustment of the frequency and studio address)
11 Sync cable for flash unit mini to mini (only with receiver kit)
12 Sync cable for camera

13 Rechargeable battery pack for receiver operation (incl. rechargable batteries)
14 Power supply device (only with receiver kit)
15 Charge cable (for use in car) (only with receiver kit)
16 USB cable (only with receiver kit)

BRONCOLOR RADIO FREQUENCY SYSTEM 2

Before use

We are very pleased you have chosen a broncolor Radio Frequency System RFS 2 unit, which is a high-quality product in every respect. If used properly, it will render you many years of good service. Please read the information contained in these operating instructions carefully. They contain important details on the use, safety and maintenance of the device. Keep these operating instructions in a safe place and pass them on to further users if necessary. They are also available online at www.broncolor.com.

With the broncolor RFS 2 you can trigger and operate by remote control broncolor units, which are equipped with an integrated RFS 2 interface.

1. OPERATION AS TRANSMITTER OR RECEIVER

The transceiver can be operated in two modes. The unit is always in transmitting mode when used in battery operation. The transceiver functions as transmitter.

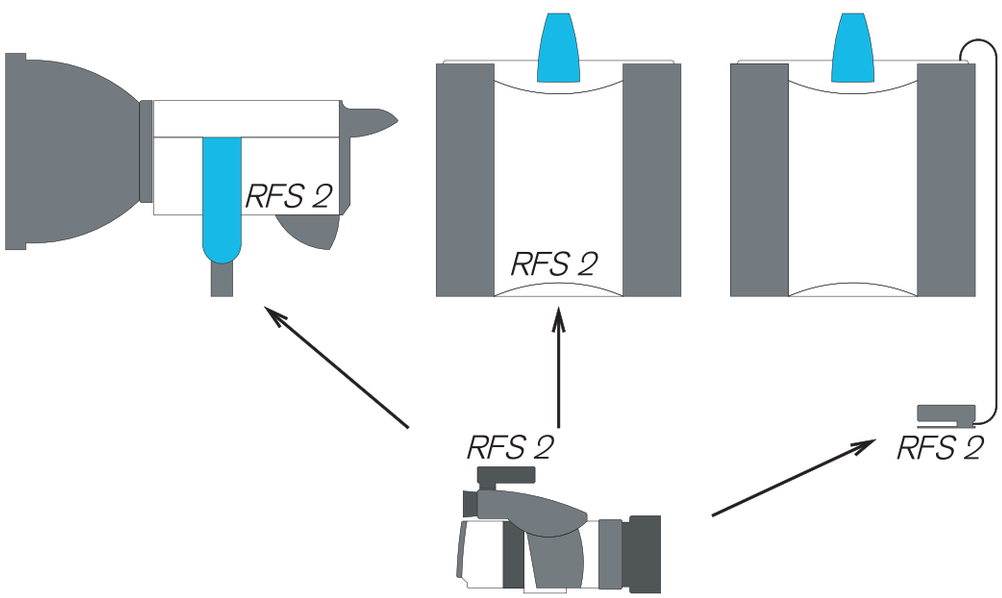
If the transceiver is supplied with energy through the provided power supply unit via the USB-port, the device switches over automatically to receiving mode. The transceiver functions as receiver.

Manual switchover of the mode is not possible.

2. RADIO FREQUENCY SYSTEM 2 (RFS 2)

The radio frequency system broncolor RFS 2 consists of the following elements:

> RFS 2 as transmitter on the camera
> RFS 2 as receiver at the power packs / monolights without internal RFS 2 radio frequency system
> RFS 2 as internal radio frequency system integrated in the power packs / monolights



2.1 RFS 2 transceiver as transmitter

The RFS 2 transceiver is used to remote-control one or more broncolor power packs or monolights equipped with RFS 2 interface using radio signals to trigger flashes. Power packs or monolights without integrated RFS 2 interfaces can be operated by connecting an RFS 2 transceiver (as receiver) to them (see 1.2).

To enable several RFS 2 devices to communicate with each other, they must all be set at the same studio address. RFS 2 devices with the same studio address can be simultaneously remote controlled. Thus, thanks to the various studio addresses, several RFS 2 groups of units can be independently remote controlled without interfering with each other.

Flash triggering is synchronized either via the central contact of the hot shoe or the sync jack of the camera. Outdoors, the remote control range is up to 50 m; indoors, it is up to 30 m. The transceiver is powered by a lithium button cell (Li-Mn CR2450). To minimise energy consumption, the transceiver is set to an energy-saving mode after four hours have elapsed. If a flash triggering action occurs through the camera whilst the RFS 2 transceiver is in energy-saving mode, a slight delay of the synchronization with the camera shutter release can take place. The RFS 2 transceiver quits the energy-saving mode after this flash release.

Attention: Although this radio system allows the selection of up to 99 studio addresses, the number of actually available channels depends on the connected RFS 2 flash unit.

For detailed instructions, please consult the manual of the respective flash unit.

2.2 RFS 2 transceiver as receiver

The device can be used as an external receiver for broncolor power packs, monolights, and third-party units that are not equipped to receive RFS 2 data. When using the device as a receiver, use the respective power supply unit and plug it into the USB socket on the side of the device. The device will automatically switch to the receiver mode.

Connect the sync cable with the "out" jack of the RFS 2 transceiver and the sync jack on the flash unit.

2.3 Operation

> Keys

The device has four keys: "test", "set", "▲" and "▼". Depending on the current mode of the device, they have different functions. The functions depend on how long the keys are pressed.

> Key press duration

A short key press is shorter than a second, a longer actuation is longer than a second.

> Trigger test flash / activate sync out connection

To trigger a test flash, briefly press the "test" button on the RFS 2 transceiver. Pressing the “test” button also activates the sync out connection.

3. SET STUDIO ADDRESS

The transceiver must have the same studio address as the flash units or receivers that are to be used.

To set the studio address, please proceed as follows:

1.) Press and hold the "set" key until "ST" blinks on the display and the studio number is indicated.
2.) Set the studio address with keys "▲" and "▼".
3.) Save the settings by pressing and holding the "set" key. "ST" is now displayed continuously.

4. SET FREQUENCY CHANNEL

Many radio frequency devices transmit in the same frequency band as the RFS 2 transceiver. To minimize mutual interference, the RFS 2 transceiver provides a choice of 40 different frequency channels. The transceiver must be set to the same frequency channel as the flash units that are to be used. The receiver units on the same studio address will automatically synchronize frequencies when the frequency of the transmitter is changed.

Procedure:

> Switch on all flash units or receivers that are to be used.
> Set all these flash units to the same studio address as that of the RFS 2 transceiver.
> Make sure the RFS 2 transceiver and the flash units that are to be synchronised are as close together as possible. Tip: For the synchronization process, the units should have intervisibility with the RFS 2 transceiver.
> Select a new frequency channel on the RFS 2 transceiver and the synchronization process occurs automatically (see next section for instructions).

Proceed as follows to set the frequency channel:

1.) Press and hold the "set" key until "ST" blinks on the display and the studio address is indicated (picture 1).
2.) Briefly press once the "set" key until "FR" blinks on the display and the frequency channel appears (picture 2).
3.) Set the frequency channel with the keys "▲" and "▼" (picture 3).
4.) Save the settings by pressing the "set" key (picture 4).

(See page 12 for pictures)

When saving the setting in the transceiver, the flash units become synchronised. The synchronisation process lasts 1 second. The frequency number rotates during synchronisation.

1)


broncolor
ST
01
test

2)


broncolor
FR
01
test

3)


broncolor
FR
03
test

4)


broncolor
FR
88
test

5. ENERGY CONTROL

The RFS 2 transceiver enables to change the power output of all RFS 2 flash units that are set to the same studio address. The output can be adjusted in 1/10 and whole f-stops.

Briefly press the key "▲":
all the RFS 2 units increase the total energy by 1/10 f-stop

Briefly press the key "▼":
all the RFS 2 units reduce the total energy by 1/10 f-stop

Long press of the key "▲":
all the RFS 2 units increase the total energy by 1 f-stop

Long press of the key "▼":
all the RFS 2 units reduce the total energy by 1 f-stop

> Resetting the device
To reset the device with factory settings, first press and hold the "test" key and then actuate the "set" key for five seconds. This resets the device.

Technical data for transceiver

Studio address setting range	1 - 99
Frequency channel setting range	1 - 40
Frequency	2.4 GHz
Transmission time (transmitter to receiver)	0.425 ms
Diaphragm shutter speed	up to 1/1500 s
Focal-plane shutter speed	up to 1/320 s
Flash triggering possible via: > Integrated hot shoe on central contact > Lateral 3.5-mm sync jack in or out	
Range outdoors	up to 50 m
Range indoors	up to 30 m
Range	up to 200 m
Integrated antenna	
Dimensions (L x B x H)	68 x 38.5 x 25 mm / 2.7 x 1.5 x 1 inch
Weight	43 g / 35 oz (including battery)

Releases per second	100
Button cell battery in transceiver	Li-Mn CR2450 (560 mAh, 3V)
Automatic switchover to energy-saving mode after	4 hours
Typical battery life	approx. 8 – 12 months or 100,000 flashes
Sync voltage	3V

In the event of problems and undefined communication malfunctions between RFS 2 devices, the cause may be strong frequency interference. In such cases, make sure the devices are not within the range of babyfones, video bridges, microwave ovens, cordless DECT telephones, WLAN routers or Bluetooth devices or change the frequency channel.

Subject to change in the interest of technical progress.

FCC Compliance Statements §15.19 and §15.21

Section 15.19 Labelling requirements
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.

Section 15.21 Information to user
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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