ARRI

MB-20 Quick Guide

02/2006

Configuration Overview

Light Protection

Top flag, K2.47103.0
Bottom flag, K2.47103.0
Side flag (pair), K2.65056.0

Hard Matte Sets
2/3" Video Format 4:3
K2.47689.0
2/3" Video Format 16:9
K2.47690.0
35mm Film
K2.47691.0

Carriers & Filter Stages

SET configurations:

MB-20, SET for 235 side bracket
for ARRI 235 side bracket with 19mm rods
K0.60023.0
Set includes:
K2.65027.0, K2.65032.0, K2.65026.0 K2.65024.0
**Bellows, light protection and filter frames
must be ordered separately**

MB-20, SET for 15mm lightweight support
for lightweight support LWS-3
K0.60022.0
Set includes:
K2.65027.0, K2.65032.0, K2.65028.0,
K2.65026.0, K2.65025.0
**Bellows, light protection and filter frames
must be ordered separately**

MB-20, SET for 19mm support
K0.60024.0
as K0.60022.0 but with adapter for 19mm studio rods
Set includes: K2.65027.0, K2.65032.0, K2.65028.0,
K2.65026.0, K2.65025.0, **K2.47101.0**
**Bellows, light protection and filter frames
must be ordered separately**

MB-20, SET for 15mm support
K0.60025.0
as K0.60022.0 but with adapter for 15mm rods
Set includes: K2.65027.0, K2.65032.0, K2.65028.0,
K2.65026.0, K2.65025.0, **K2.47102.0**
**Bellows, light protection and filter frames
must be ordered separately**

Filter frames

4" x 4" Filter frame
K2.65098.0

**4" x 5,65" Filter frame
horizontal**
K2.65048.0

**4" x 5,65" Filter frame
vertical**
K2.65049.0

**Filter frame combo
4" x 5.65" / 5x5**
K2.65023.0
5.65" x 5.65" / 5x6
K2.65022.0

**Clamp-On adapter
for direct clip-on use.
requires adapter rings**
K2.65030.0

**Adapter Rings
for Clamp-On adapter**
K2.47671.0 **(ø 80mm)***
*for Video Lenses
K2.47672.0 **(ø 80mm)-HS***
*for Zeiss Super Speed Lenses
K2.47673.0 **(ø 85mm)**
K2.47674.0 **(ø 86mm)**
K2.47675.0 **(ø 87mm)***
*for Zeiss Vario Sonnar
K2.47676.0 **(ø 90mm)**
K2.47677.0 **(ø 92mm)**
K2.47678.0 **(ø 95mm)***
*not for wide angle video zooms
K2.65031.0 **(ø 95mm) WA***
*for 13x4.5mm Fujinon
and 11x4.7mm Canon
K2.47679.0 **(ø 96mm)**
K2.47680.0 **(ø 98mm)**
K2.47681.0 **(ø 100mm)**
K2.47682.0 **(ø 104mm)**
K2.65097.0 **(ø 105mm)**
K2.47683.0 **(ø 110mm)**
K2.47684.0 **(ø 114mm)**
K2.47685.0 **(ø 117mm)**
K2.47686.0 **(ø 120mm)**
K2.47687.0 **(ø 128mm)***
*not for Fujinon HAe3x5
K2.47688.0 **(ø 128mm) WA***
*for Fujinon HAe3x5

Basic Modules & Accessories

**MB-20 basic module
with sun shade**
K2.65027.0

2-filter stage
K2.65026.0
3-filter stage
K2.65089.0

**Back 138mm
bellows adapter**
K2.65028.0

Swing away module
K2.65032.0

**Console for
lightweight support**
K2.65025.0
(requires swingaway module)

Clamp-On Adapter
K2.65030.0
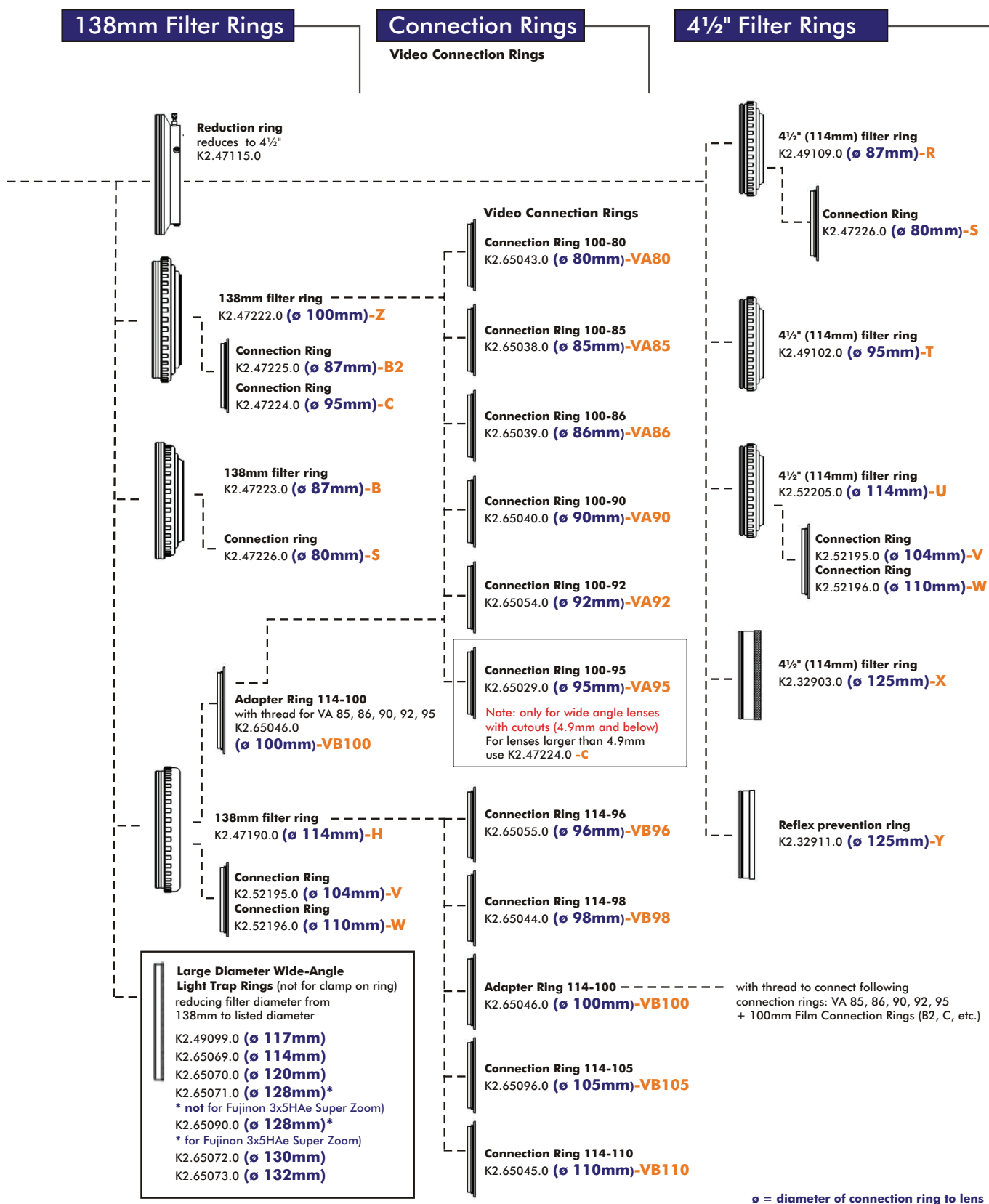(instead of swing
away module)

**Console for
235 side bracket**
K2.65024.0
Rod Reduction to 15mm
K2.47062.0

Adapter for 19mm Rods
K2.47101.0
Adapter for 15mm Rods
K2.47102.0

Configuration Overview

138mm Filter Rings

Connection Rings
Video Connection Rings

4½" Filter Rings

Reduction ring
reduces to 4½"
K2.47115.0

4½" (114mm) filter ring
K2.49109.0 (ø 87mm)-R

Connection Ring
K2.47226.0 (ø 80mm)-S

138mm filter ring
K2.47222.0 (ø 100mm)-Z

Connection Ring
K2.47225.0 (ø 87mm)-B2
Connection Ring
K2.47224.0 (ø 95mm)-C

138mm filter ring
K2.47223.0 (ø 87mm)-B

Connection ring
K2.47226.0 (ø 80mm)-S

Adapter Ring 114-100
with thread for VA 85, 86, 90, 92, 95
K2.65046.0
(ø 100mm)-VB100

138mm filter ring
K2.47190.0 (ø 114mm)-H

Connection Ring
K2.52195.0 (ø 104mm)-V
Connection Ring
K2.52196.0 (ø 110mm)-W

**Large Diameter Wide-Angle
Light Trap Rings** (not for clamp on ring)
reducing filter diameter from
138mm to listed diameter

K2.49099.0 (ø 117mm)
K2.65069.0 (ø 114mm)
K2.65070.0 (ø 120mm)
K2.65071.0 (ø 128mm)*
* **not** for Fujinon 3x5HAe Super Zoom)
K2.65090.0 (ø 128mm)*
* for Fujinon 3x5HAe Super Zoom)
K2.65072.0 (ø 130mm)
K2.65073.0 (ø 132mm)

Video Connection Rings

Connection Ring 100-80
K2.65043.0 (ø 80mm)-VA80

Connection Ring 100-85
K2.65038.0 (ø 85mm)-VA85

Connection Ring 100-86
K2.65039.0 (ø 86mm)-VA86

Connection Ring 100-90
K2.65040.0 (ø 90mm)-VA90

Connection Ring 100-92
K2.65054.0 (ø 92mm)-VA92

Connection Ring 100-95
K2.65029.0 (ø 95mm)-VA95

Note: only for wide angle lenses
with cutouts (4.9mm and below)
For lenses larger than 4.9mm
use K2.47224.0 -C

Connection Ring 114-96
K2.65055.0 (ø 96mm)-VB96

Connection Ring 114-98
K2.65044.0 (ø 98mm)-VB98

Adapter Ring 114-100
K2.65046.0 (ø 100mm)-VB100

with thread to connect following
connection rings: VA 85, 86, 90, 92, 95
+ 100mm Film Connection Rings (B2, C, etc.)

Connection Ring 114-105
K2.65096.0 (ø 105mm)-VB105

Connection Ring 114-110
K2.65045.0 (ø 110mm)-VB110

4½" (114mm) filter ring
K2.49102.0 (ø 95mm)-T

4½" (114mm) filter ring
K2.52205.0 (ø 114mm)-U

Connection Ring
K2.52195.0 (ø 104mm)-V
Connection Ring
K2.52196.0 (ø 110mm)-W

4½" (114mm) filter ring
K2.32903.0 (ø 125mm)-X

Reflex prevention ring
K2.32911.0 (ø 125mm)-Y

ø = diameter of connection ring to lens

About this ARRI Quick Guide

This Quick Guide (order number K5.44285.0) provides a short introduction to the ARRI MB-20 Compact Matte Box. It is essential that you acquaint yourself with this guide before operating the equipment.

Even though all efforts have been made to ensure this guide's accuracy, changes and upgrades to the products described can result in different hardware or behaviour. Technical data are subject to change without notice.

This document can be downloaded from www.arri.com in Acrobat pdf format. The Acrobat Reader can be downloaded free from the Adobe web site at www.adobe.com. A PostScript printer gives best printing results.

Tools

Anyone operating the ARRI MB-20 system should have a **3 mm metric hex wrench** which is used to fine tune the vertical orientation of the MB-20 with the Swing-away Module fitted.

Safety Specifications

- Assembly and initial operation should be carried out only by persons who are familiar with the equipment.
- Repairs should be carried out only by authorised ARRI service centres.
- Use only original ARRI replacement parts and accessories!
- Do not remove any screws which are secured with paint.

MB-20 System

The ARRI MB-20 Compact Matte Box is a versatile, modular matte box designed primarily for the high definition video market, but can equally well be used with 16 or 35 format film cameras. Interchangeable modules allow for either rod mounted, swing-away operation or for clamping directly onto the lens.

The heart of the matte box is the Basic Module, in front of which can be fitted the removable Sunshade and Top, Bottom and Side Flags. Interchangeable Hard Mattes can be snapped into the front of the Sunshade.

The back of the Basic Module accepts a 2 or 3 Filter Stage – all filters are individually rotatable.

The right-hand edge of the Basic Module mates with one of 2 support systems:

- Check recent price lists and Configuration Overviews for new parts not yet in the MB-20 program at the time of printing of this Quick Guide.

The Clamp-on Adapter

In this mode the matte box clamps directly to the front of the lens. The Clamp-on Adapter used alone fits lenses with a front diameter of 130mm. A range of Adapter Rings reduces the basic 130mm diameter down to as little as 80mm to work with a wide variety of lenses.

The Swing Away Module

The Swing Away Module offers all the features of a production matte box, where the matte box is mounted on support rods and the entire front section swings forward to facilitate lens changes. To the Swing Away Module is fitted either the Console for Lightweight Support or the Console for 235 Side Bracket. The Console for Lightweight Support mounts directly on 15mm Lightweight Support Rods or, with the addition of an adapter, onto 15mm or 19mm studio support rods. The Console for 235 Side Bracket allows the matte box to be used with an ARRIFLEX 235 fitted with Side Bars.

In Swing Away mode the rear of the filter stage is fitted with the Back 138mm Bellows Adapter. This accepts a selection of 138mm and 4 ½" Filter Rings, which offers the addition of a further, round, rotatable filter. The filter rings combine with Connection or Adapter Rings to work with lenses of different front diameters. (See the Configuration Overview on pages 2 & 3 of this guide for details).

Basic Operation

The Basic Module

Basic Module

Mounting holes

Blue clamp knobs

Sunshade release knobs
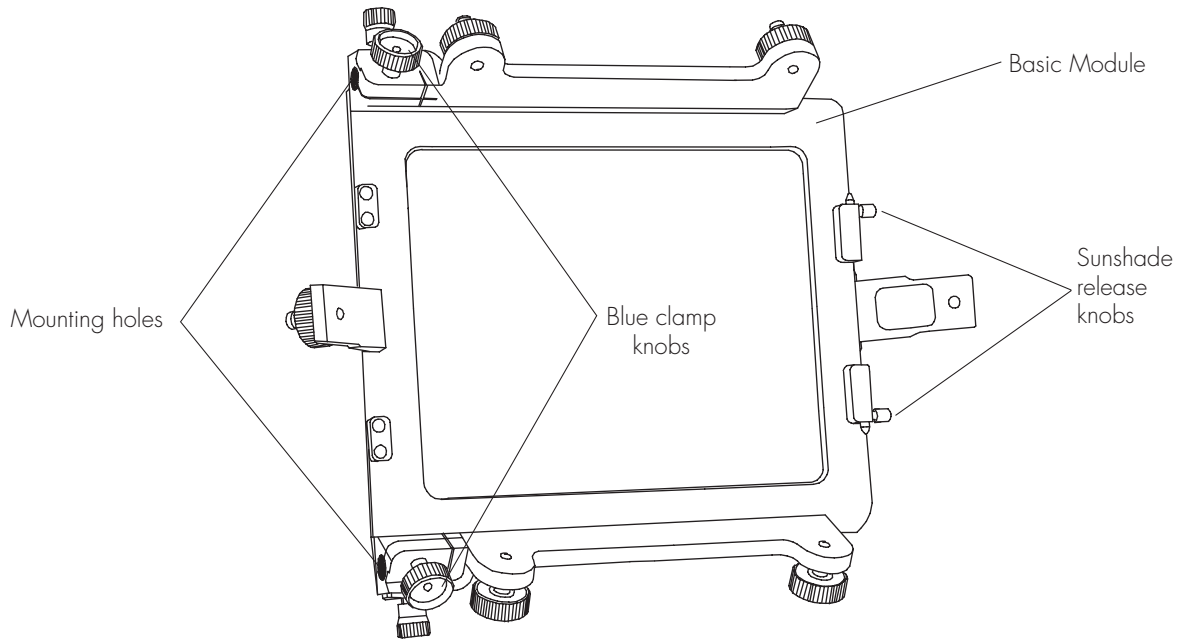
The Basic Module is the core plate of the Matte Box in front of which the sunshade and flags are mounted. Behind it is fitted either a two or three stage filter holder. One edge has two mounting holes which allow either the Clamp-on Adapter or Swing Away Module to be fitted.

The Filter Stage

Basic Module

Filter Stage

1

2

Cut-outs

Release knob
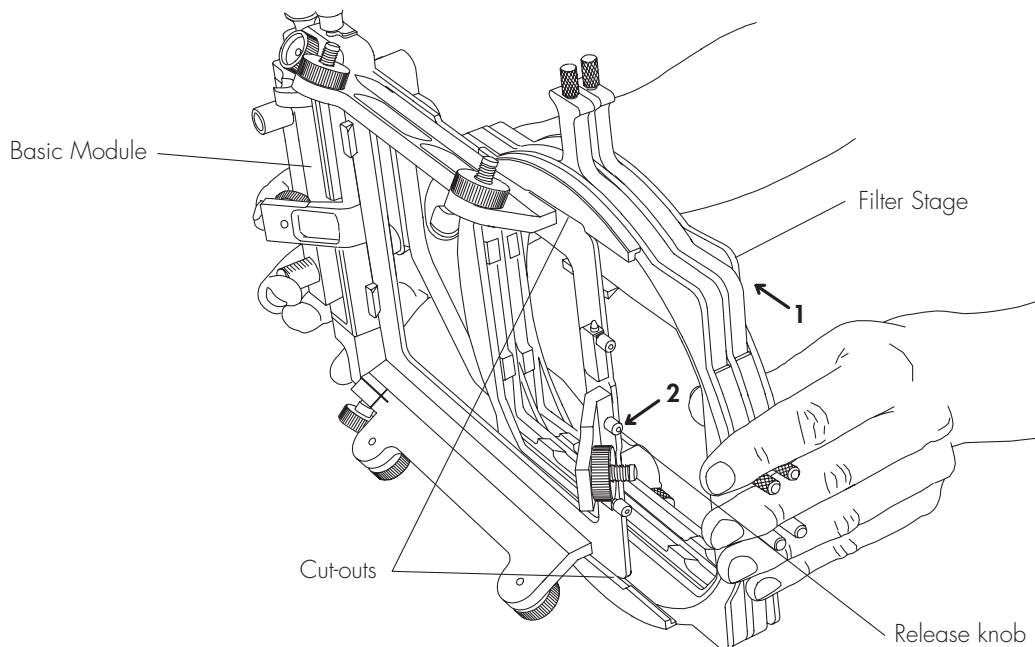
Fit the cut-outs on the front of the Filter Stage over the corresponding tabs on the back of the Basic Module in the position shown, and then slide it into the central position until it locks in place (1). To remove it again, pull the filter release lever forward (2) and reverse the procedure.

Basic Operation

Combo Filter Trays
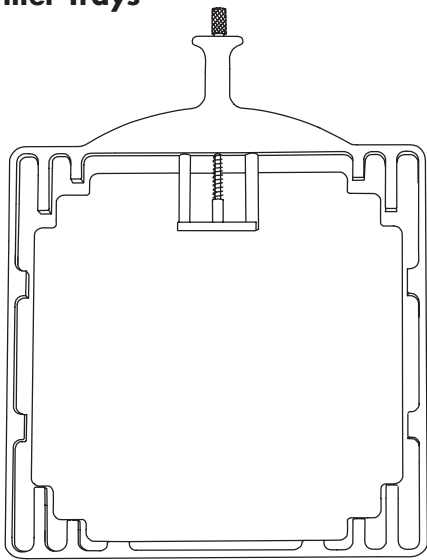
Combo 1
Holds 4" x 5.65" filters horizontally or vertically or 5" x 5" square filters.
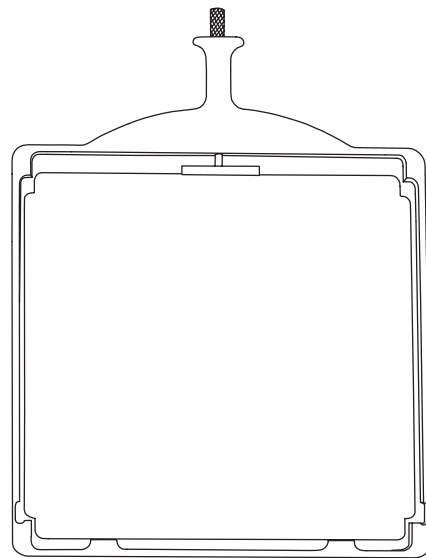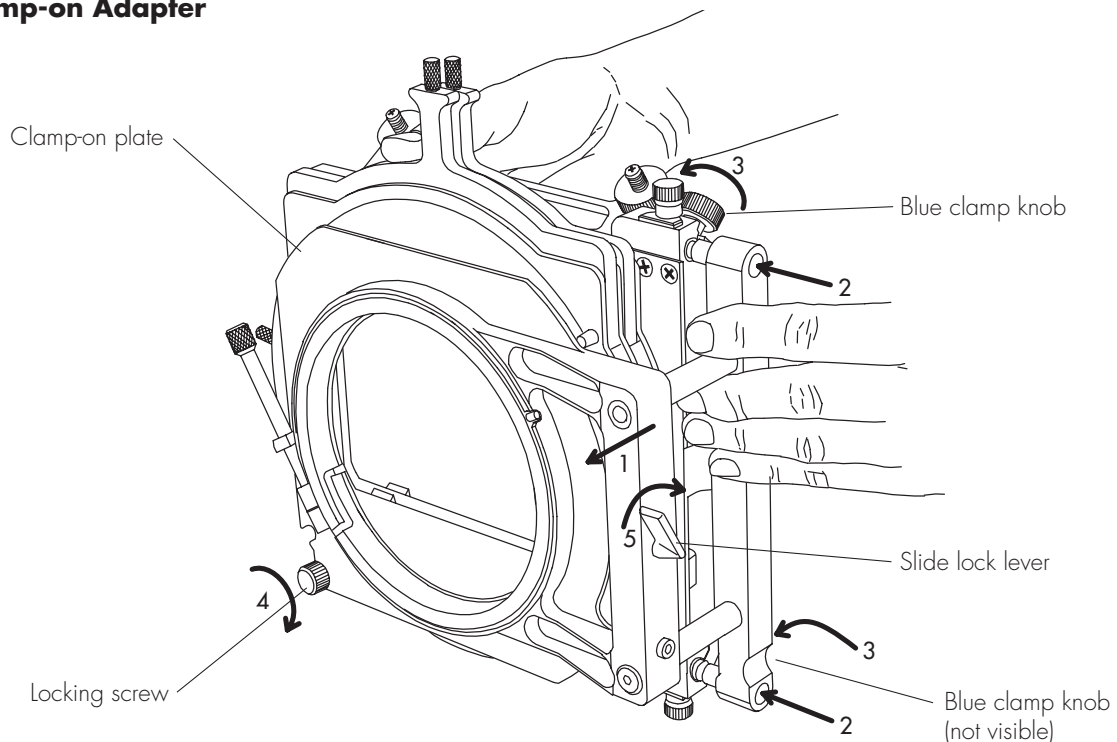
Combo 2
Holds 5.65" x 5.65" square filters or 5" x 6" filters.

In addition to conventional 4" x 5.65" filter trays in both horizontal and vertical orientation, the MB-20 offers two Combo Filter Trays. These are designed so filters of more than one size and shape can be used.
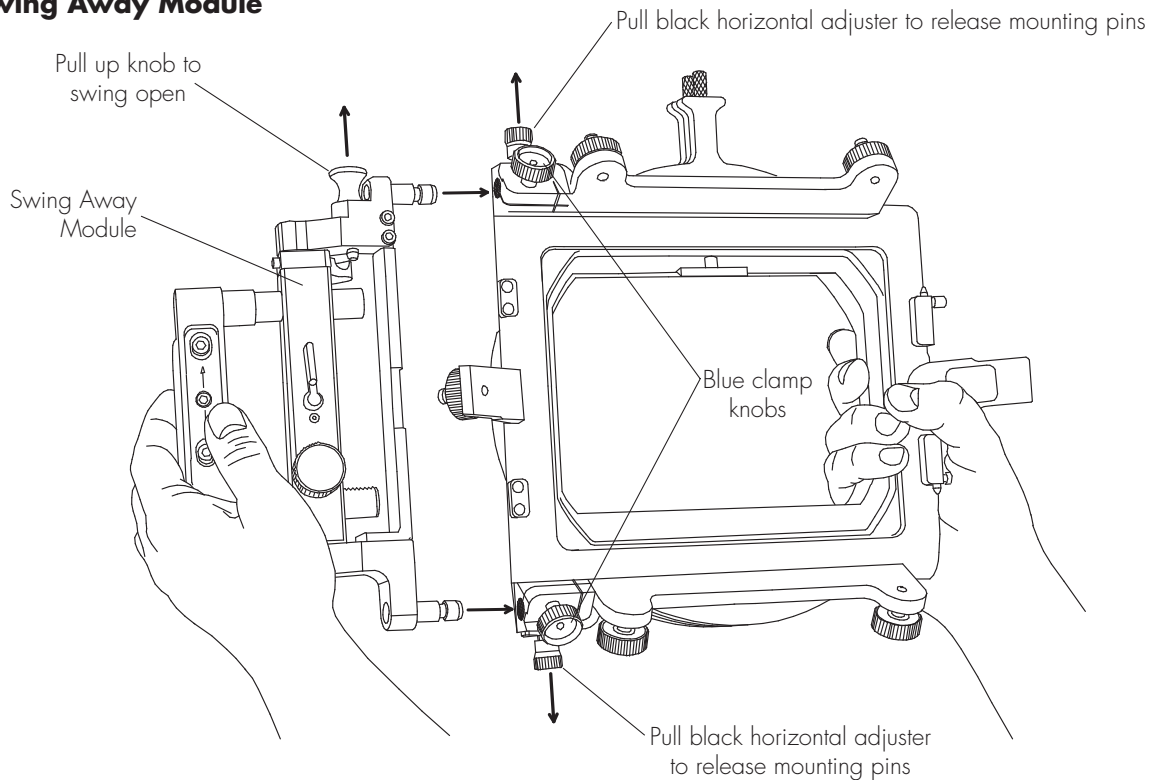
The Clamp-on Adapter

Clamp-on plate

Blue clamp knob

Slide lock lever

Locking screw

Blue clamp knob (not visible)

To fit the Clamp-on Adapter to the Basic Module, ensure the slide lock lever is unlocked, and slide the Clamp-on plate back fully on the rods (1). Engage the two mounting pins into the holes on the Basic Module. Press fully home (2) and tighten the two blue clamp knobs (3). Now slide the Clamp-on Plate forward and secure it to the back of the filter stage with the locking screw (4). Finally tighten the slide lock lever (5).

Basic Operation

The Swing Away Module

Pull up knob to
swing open

Pull black horizontal adjuster to release mounting pins

Swing Away
Module

Blue clamp
knobs

Pull black horizontal adjuster
to release mounting pins

Engage the two mounting pins of the Swing Away Module into the corresponding holes in the Basic Module, press fully home and tighten the two blue clamp knobs. To remove the Swing Away Module, loosen the blue clamp knobs and it is then necessary to pull the black horizontal adjuster out of engagement with the mounting pins before they can be withdrawn from the Basic Module.

Back 138mm Bellows Adapter

Blue lock screw

Locating pin

Dia 95mm Video

Red rotation lock

Locating pin

Back 138mm
Bellows Adapter
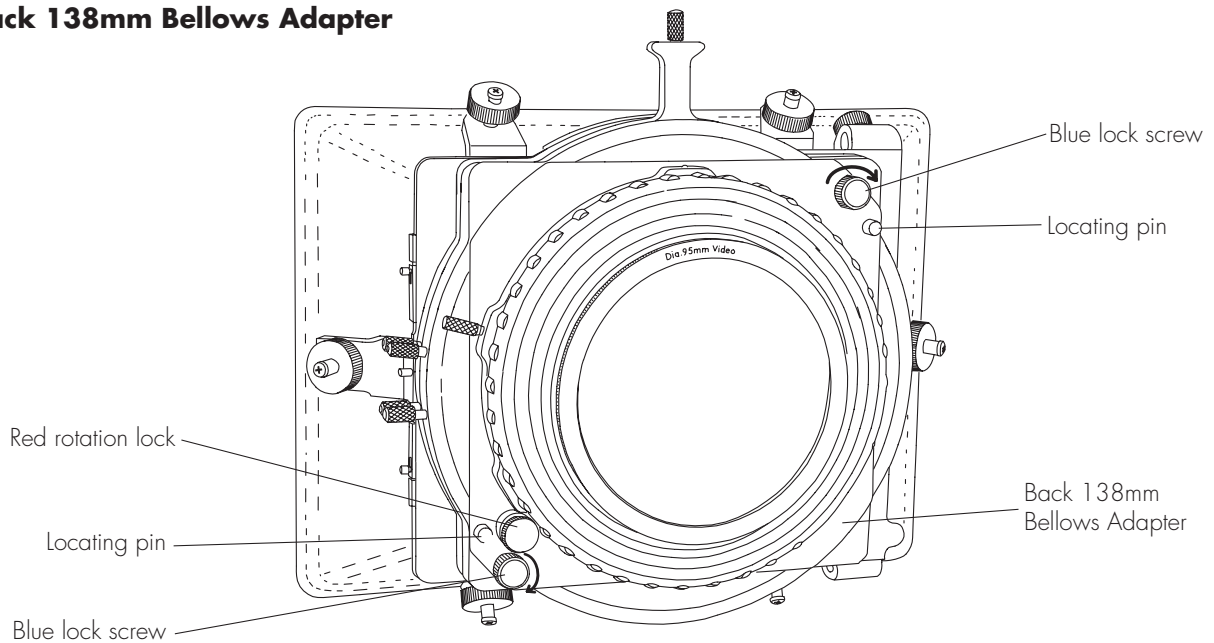
Blue lock screw

Fit the Back 138mm Bellows Adapter over the two locating pins and secure with the two blue lock screws. The red rotation lock either releases or locks the rotation of the complete bellows adapter along with any filter mounted in the bellows filter holder.
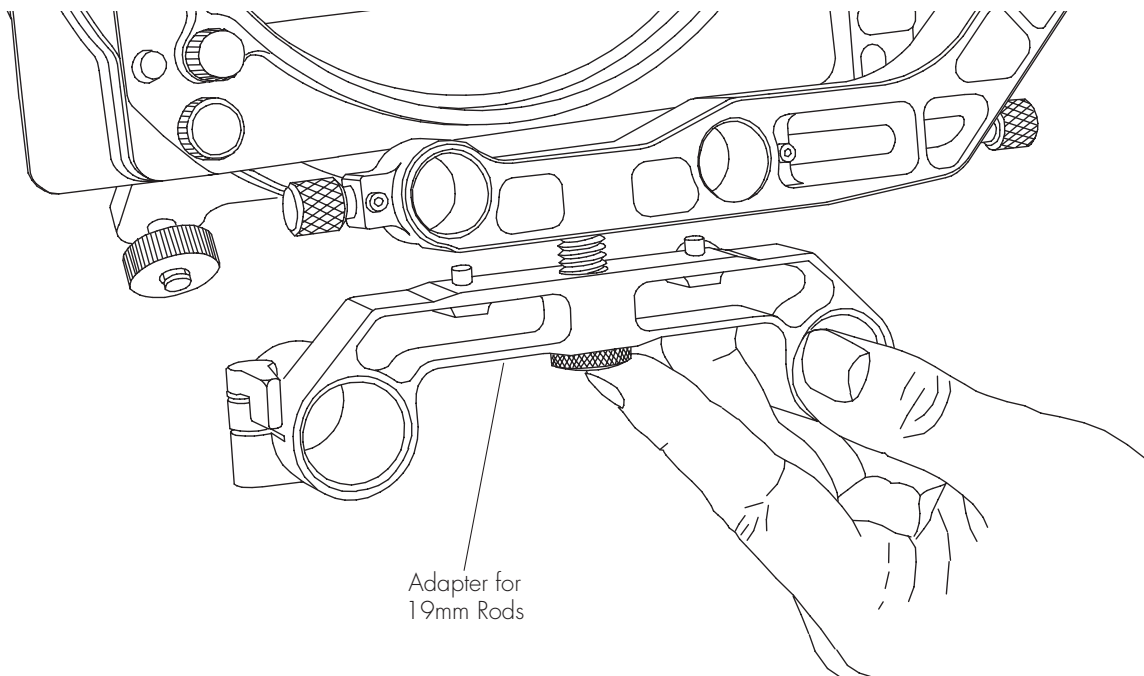
Basic Operation

Console for Lightweight Support

Lock screw

Lock screw

Console for Lightweight
Support
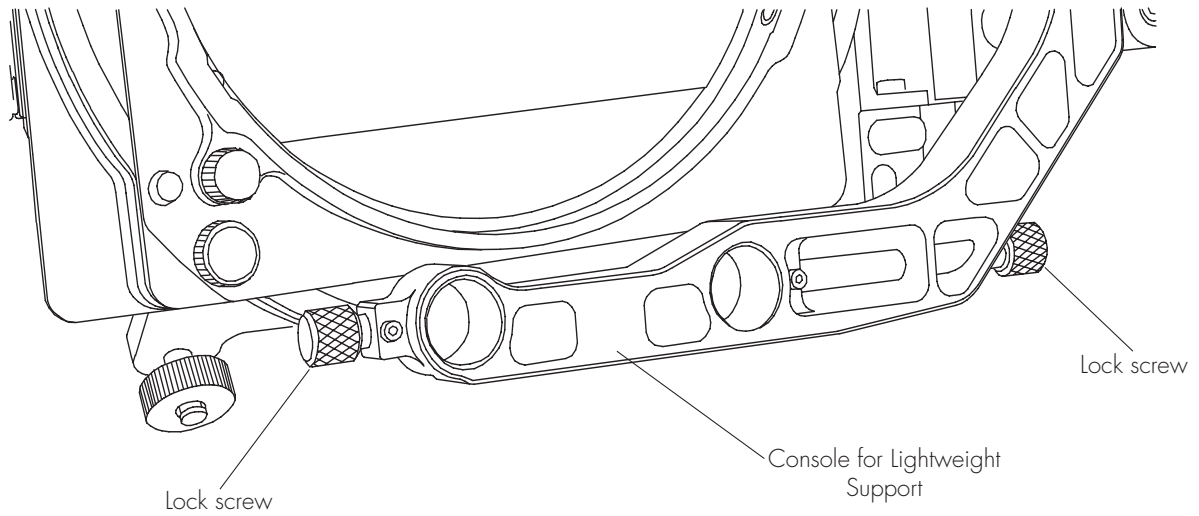
The Console for Lightweight Support attaches to the Swing Away Module and allows the matte box to be mounted on 15mm lightweight support rods. When the correct distance from the camera has been set tighten the lock screws to lock the console to the rods.
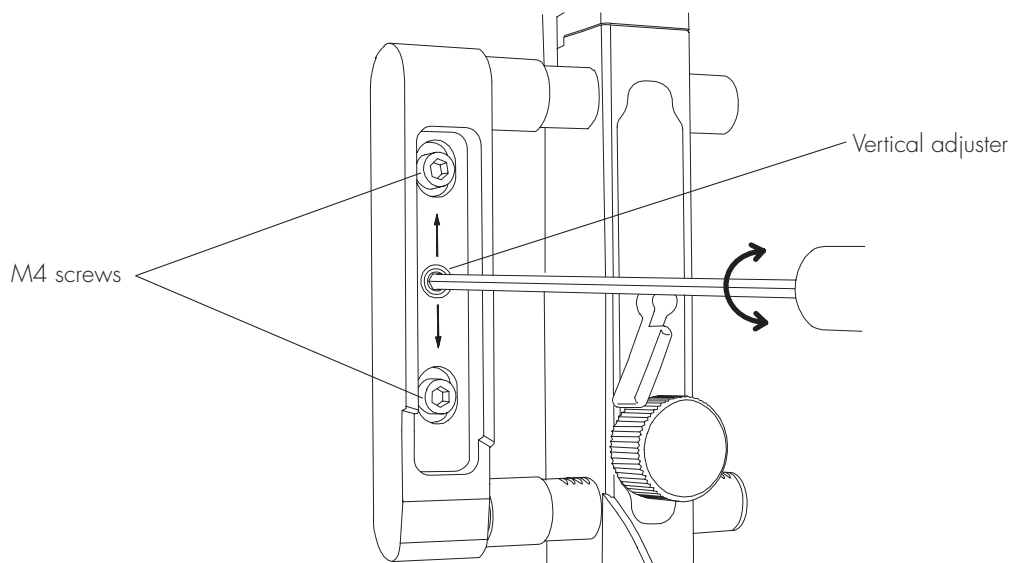
Adapter for 19mm or 15mm Rods

Adapter for
19mm Rods

To use the MB-20 with a bridge plate and either 19mm or 15mm heavy duty support rods, an adapter needs to be fitted to the bottom of the Console for Lightweight Support as shown above.

Basic Operation

Vertical Adjustment

M4 screws

Vertical adjuster

The Swing-away Module is attached to either the Console for Lightweight Support or the Console for 235 Side Bracket by two M4 screws. Between these is an adjuster for the vertical alignment of the matte box. To operate this adjuster, use a 3mm hex wrench to loosen the two M4 screws slightly before using it to rotate the adjuster. Once the desired alignment is achieved, tighten the two M4 screws.
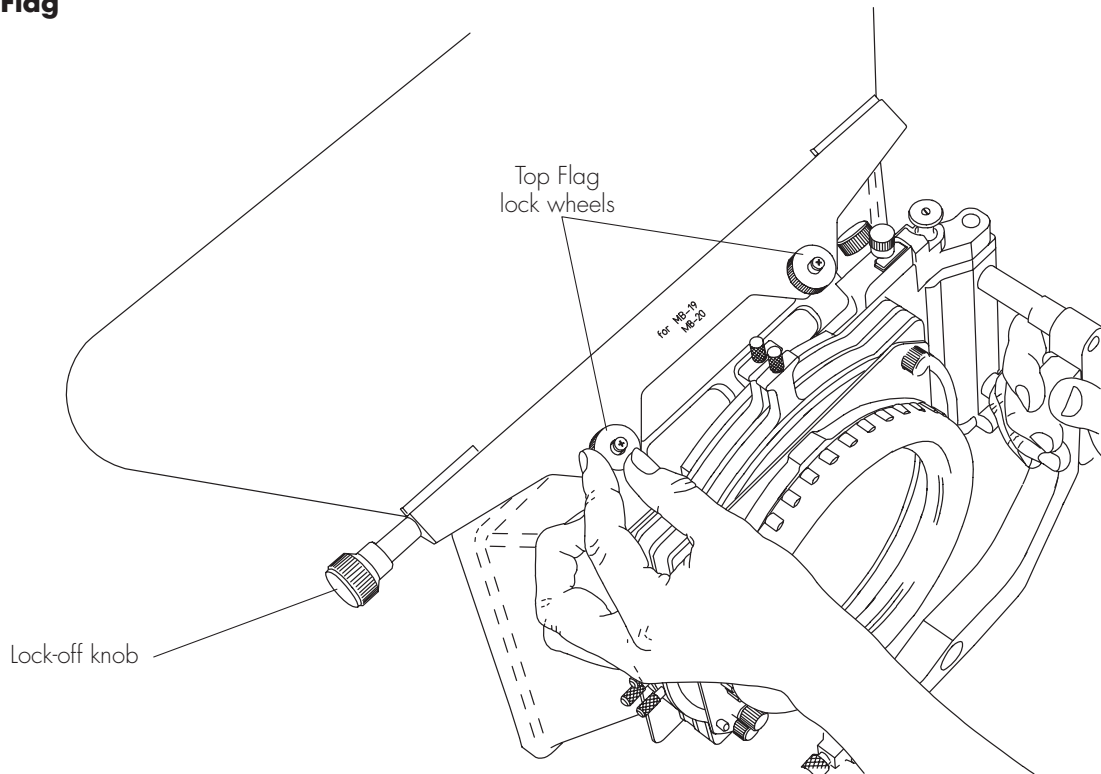
Horizontal Adjustment

Black horizontal adjuster
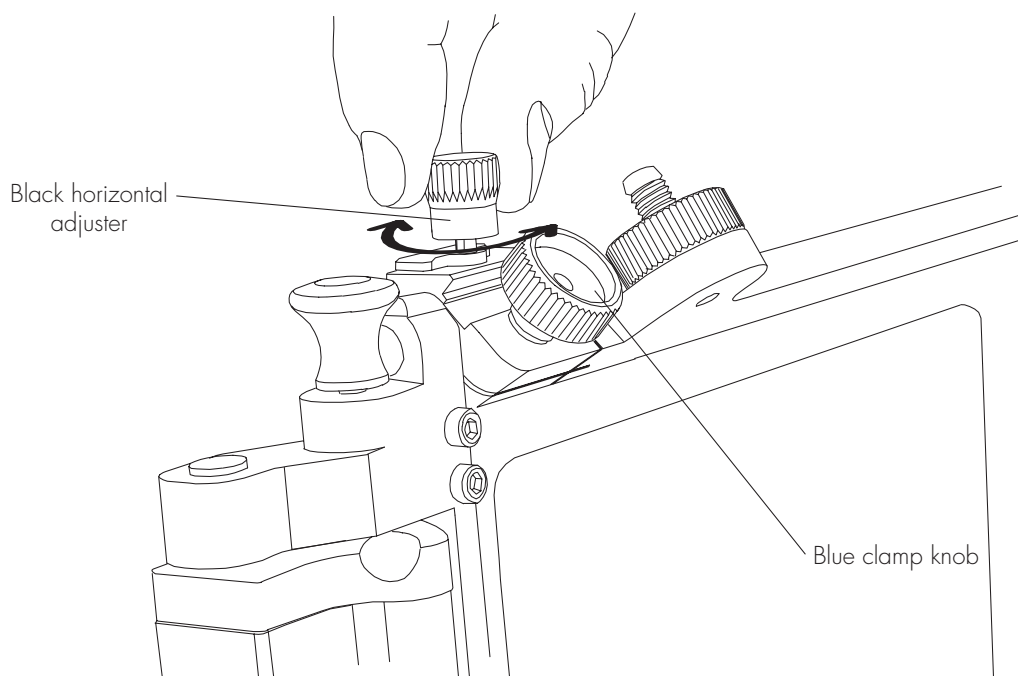
Blue clamp knob

Before tightening the blue clamp knobs, the horizontal position of the matte box can be fine tuned by rotating the two black horizontal adjusters (top one only shown). Once the desired alignment is achieved, lock the two blue clamp knobs.
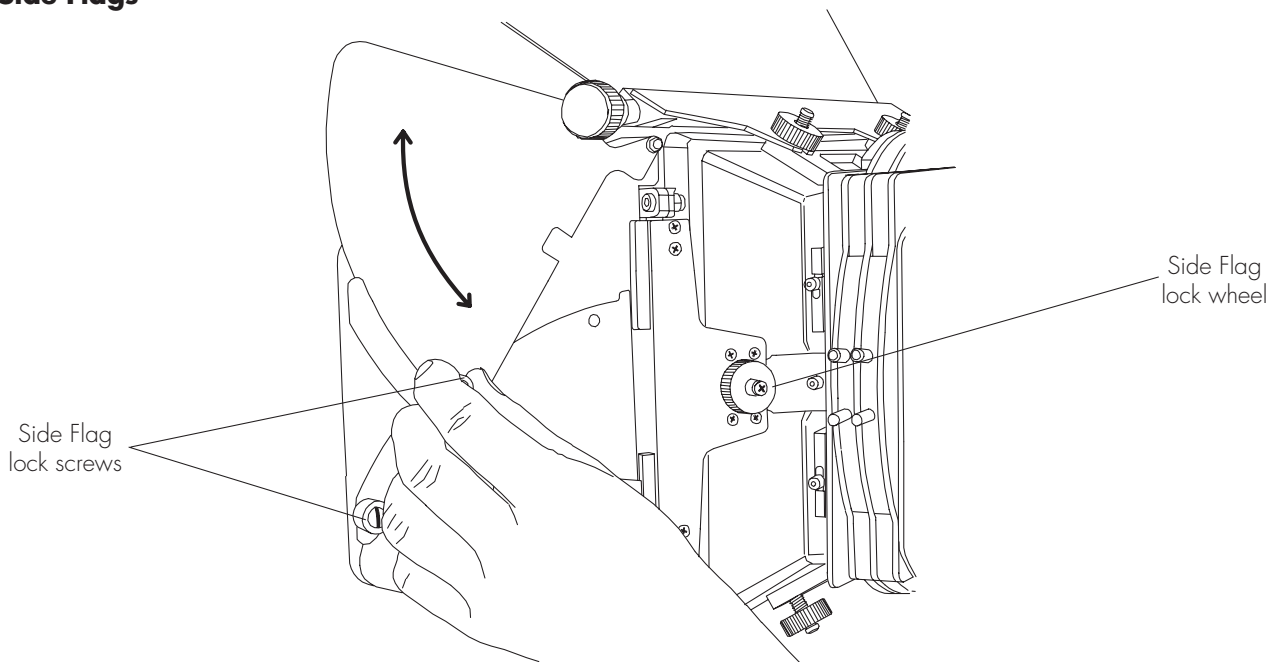
Basic Operation

Top Flag

Top Flag
lock wheels

for MB-19
MB-20

Lock-off knob

The Top Flag is held onto the Basic Module by two lock wheels, as shown above. It can be adjusted and fixed in position by tightening the lock-off knob at one end. If desired, the Top Flag can be attached underneath the matte box to form a bottom flag.
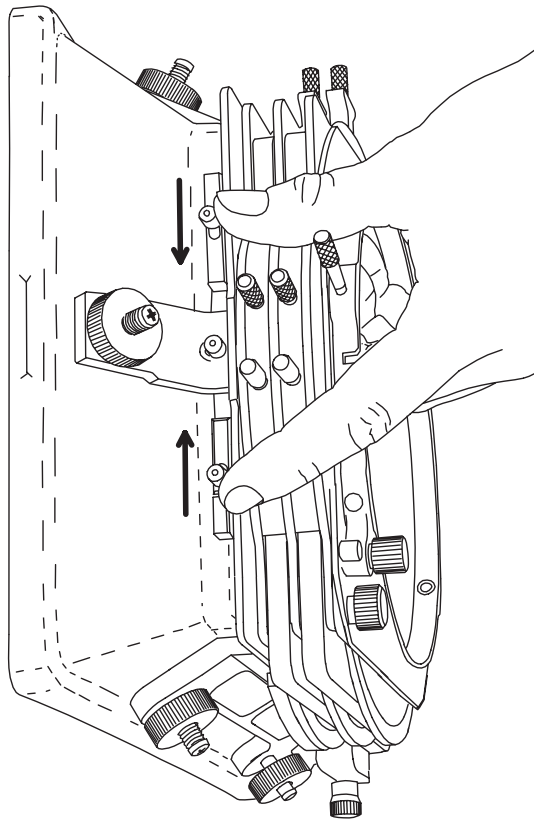
Side Flags

Side Flag
lock wheel

Side Flag
lock screws

The two side flags are identical. They attach to a single lug on either side of the Basic Module. The top and bottom edges are adjustable.

Removing the Sunshade

The Sunshade is quickly removed by squeezing together the two release buttons, as shown above. The opposite side of the sunshade is held in place by two metal lugs. When re-fitting the Sunshade, these must be engaged first.

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