rad3 BULLITT Base Box / Kids Box / Tarpaulin / Canopy

Congratulations on your purchase decision and have fun on your venture!

Enclosed are some instructions for the use, assembly and care of the box.

We have tried to keep the total weight as low as possible during the construction. Nevertheless, you should work in pairs if necessary during assembly and observe the usual rules for handling heavy and bulky objects - for the sake of your health.

The box is adapted for the Bullitt type cargo bikes and tested with the 2013 and 2015 frames - also with STePS drive, in today's version 2 also for the larger tolerances especially with the E8000. The Canopy does NOT fit on the E8000, as a wider handlebar is installed here (shortening possible at your own responsibility).
At the front, at the bottom and at the back, the panels are attached to the existing mounting brackets on the frame.
NOTE: Unfortunately, the tolerance of the frames is sometimes VERY large, you may have to widen our holes. We ask for your understanding.
The box itself is a kit made of 5 panels:
1x front, 1x base, 1x back, 2x sides and in the standard version 1x backrest with foam.

rad3 accepts no liability for faults and consequential faults resulting from assembly and use deviating from the intended area of use. This also applies to own attachments and modifications to the box.

We create step by step video tutorials - please have a look at https://vimeo.com/rad3de/
You will need some manual dexterity and the following tools for assembly:

Allen key 4 / 5 / 6 mm Open-
ended / ring spanner 10 mm
for tarpaulin and canopy
(Rechargeable) drill 1.5
mm drill bit
Cross-recess screwdriver PZ2 Ruler
Pin / Scriber

Some of the photos still show pre-series types. Don't let this irritate you - the technology is the same - we will update this.

Revisions:

Designation	Changes (focal points)	Date
Instructions-rad3_bullitt_kids_box_2022-09-12.pdf	Small corrections: 8 instead of 10 push buttons for tarpaulin, 3 additional washers for front panel, additions for 5-point harnesses, note on creaking	12.09.2022
Instructions-rad3_bullitt_kids_box_2019-11-10.pdf	Kidsbox version 10.2, elongated holes in the front panel to compensate for tolerances (especially E8000), holes in the rear wall enlarged t o compensate for tolerances, belt guide optimised, foam backrest no longer glued but velcro instead, small geometric optimisations, (preparation for) side with door as option, modified canopy	10.11.2019
Instructions-rad3_bullitt_kids_box_2019-05-31.pdf		31.05.2019
Instructions-rad3_bullitt_kids_box_2019-03-15.pdf		15.03.2019
Instructions-rad3_bullitt_kids_box_2019-01-19.pdf		19.01.2019
Instructions-rad3_bullitt_kids_box_2018-03-15.pdf		15.03.2018
Instructions-rad3_bullitt_kids_box_2017-12-01.pdf		01.12.2017
Instructions-rad3_bullitt_kids_box_2017-07-21.pdf		21.07.2017
Instructions-rad3_bullitt_kids_box_2017-04-22.pdf	First edition	22.04.2017

0. the accessories - please check for completeness before assembly

Base Box:
3 pcs. Flange head screws M6 x 60 mm (front panel)
4 pcs. countersunk head screws M6 x 70 mm (base plate) 4 pcs. Flange head screws M6 x 25 mm (back plate) 14 pcs. K-washers M6
4 pcs. locking cap nuts M6 7 pcs. locking nuts M6
7 pcs. Plastic sleeves 20 mm (base plate + front plate) 4 pcs. Plastic sleeves 15 mm (base plate)
1 pc. tensioning strap if necessary
protective inserts

Fig. 0-1:
the accessories Basis Box / Kids Box

kids accessories:
2 pcs. Y-Gute Standard or Fidlock (bottom 40 mm webbing)
4-8 pcs. Belt buckles for 25 mm belt width (for standard belts)
2 pcs. Belt buckles for 40 mm belt width (for Fidlock belts and standard at the bottom for wide slots!)

Tarpaulin:
8 press studs
8 pan-head screws 3.9 x 6.5 mm

Canopy
10 press studs
8 pan-head screws 3.9 x 9.5 mm for columns (9mm)
2 pan head screws 3.9 x 6.5 mm for sides (6mm panels) 2 rod sleeves with
4 pcs. Flange head screws M6 x 20 4 pcs. lock nuts M6
4 pcs. K-washers M6
4 pcs. K-washers M6 small

Fig. 0-2:
the accessories for kids comparison straps above: Fidlock Below: Standard

Fig. 0-3:
The Canopy accessories

Fig. 0-4:
the accessories tarpaulin screws 3.9 x 6.5mm

1. To protect your bike and reduce noise, you should enclose e.g. strips of an old bicycle inner tube between the panels and the frame. Of course, you can also use professional (thick) paint protection film or insulation foam strips.
If you buy your Bullitt from us, we can use partition tape B1 from Würth ®.

Fig. 1-1:
Protective supplement
Paint protection, noise reduction

Fig. 1-2:
with Würth tape (glued on the underside!)

2. If necessary, fit the belts as described in point 9 now - it is easier.
Place the bottom panel from front to back on the base frame, taking care if necessary t h a t the inserts do not slip. Align the plate so that the distances to the frame are even on the right and left.

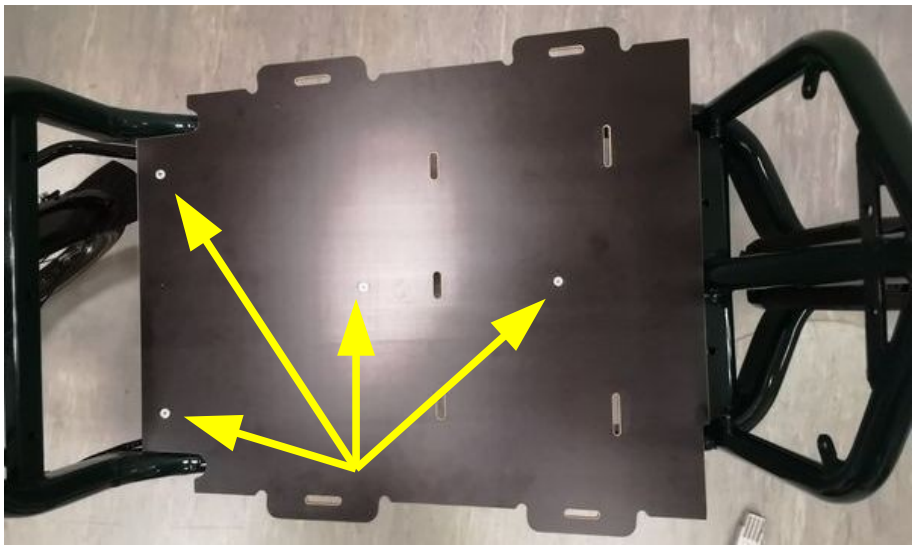

Fig. 2:
Insert base plate, screw points

3. Insert 4 countersunk screws 75 mm at the holes marked above. On the underside, the sleeves 20+15 mm must be inserted.
Place a K washer (round edge to the frame / paint) and a nut on each from below and screw them on loosely.

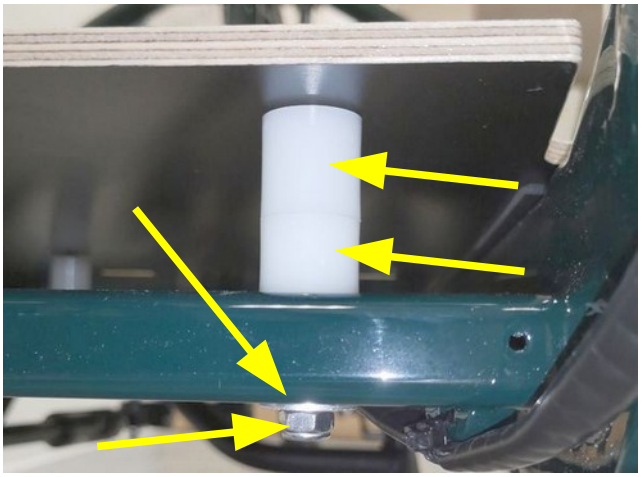

Fig. 3:
Screws 70 mm
Sleeve sets 20+15 mm K-washers Lock nuts

4. Place the back panel in the centre. Insert 4 flange head screws 25 mm at the designated holes.

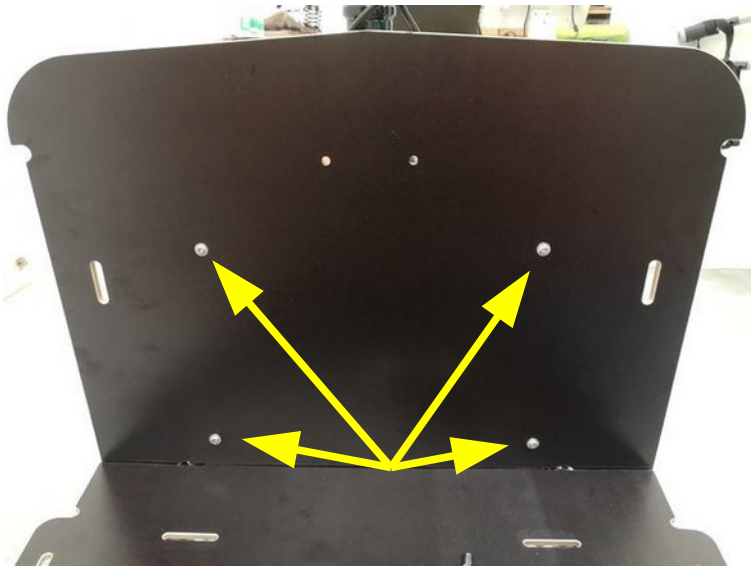

Fig. 4-1:
Put on rear wall, screws 25 mm
K-washers Cap nuts

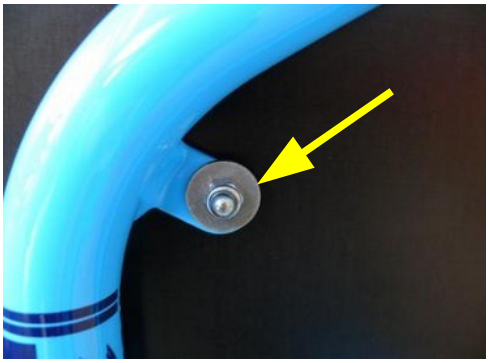

Fig. 4-2:
View from the driver Disc with cap nuts

Place a K washer (round edge to the frame / paint) and a cap nut / nut on each from the rear and screw them on loosely.

5. Place the front panel in the centre. Insert 3 flange head screws 60 mm at the designated slotted holes. New: please also use additional washers on the inside.

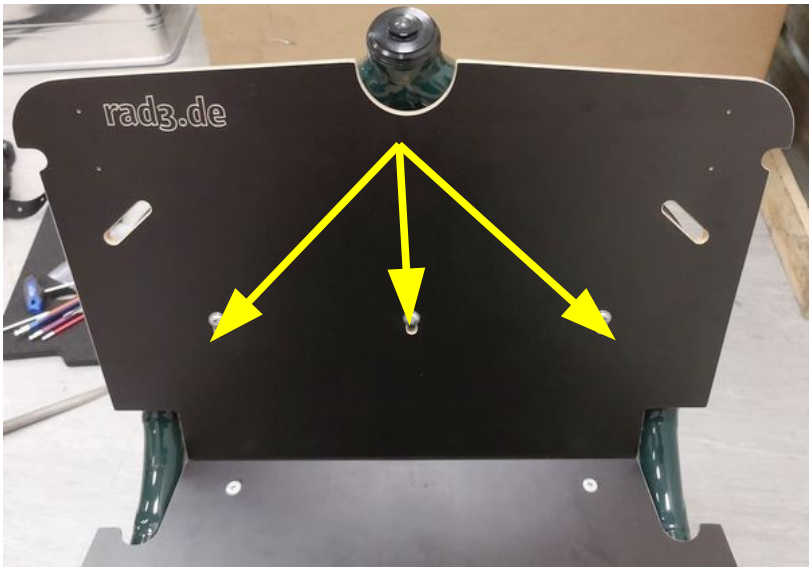

Fig. 5
Put on front panel, screws 60 mm
K-washers Locknuts

6. On the front side, the sleeves must be inserted 20 mm.
Place a K washer (round edge to the frame / paint) and a nut on each from the front and screw them on loosely.
ATTENTION, here it is particularly important not to tighten the nuts yet, as the panel must be aligned in height AFTER inserting the sides. There is usually a gap of 2-5 mm between the bottom and the base plate.

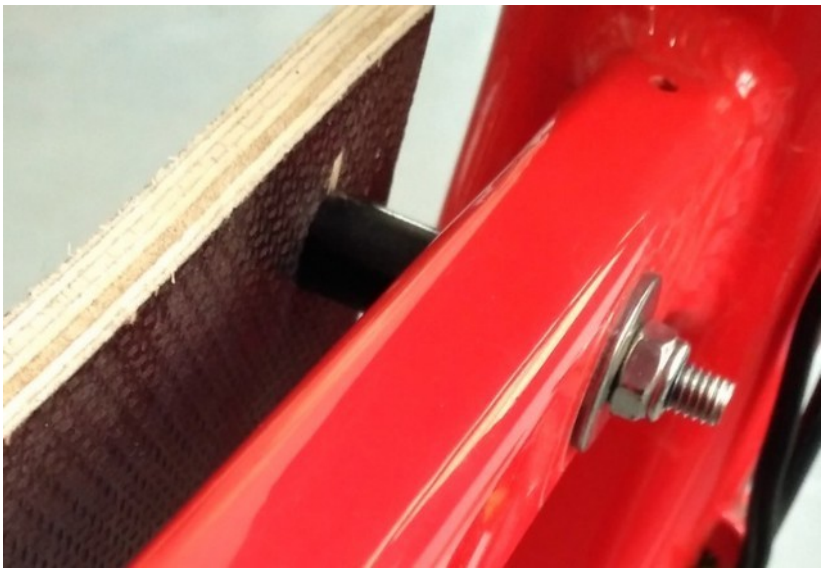

Fig. 6
Put on front panel, screws 60 mm
K-washers Locknuts

7. Once again, align all the panels centrally to the frame and to each other and then carefully tighten the nuts one after the other but not quite yet. It should still be possible to move the front panel in particular.

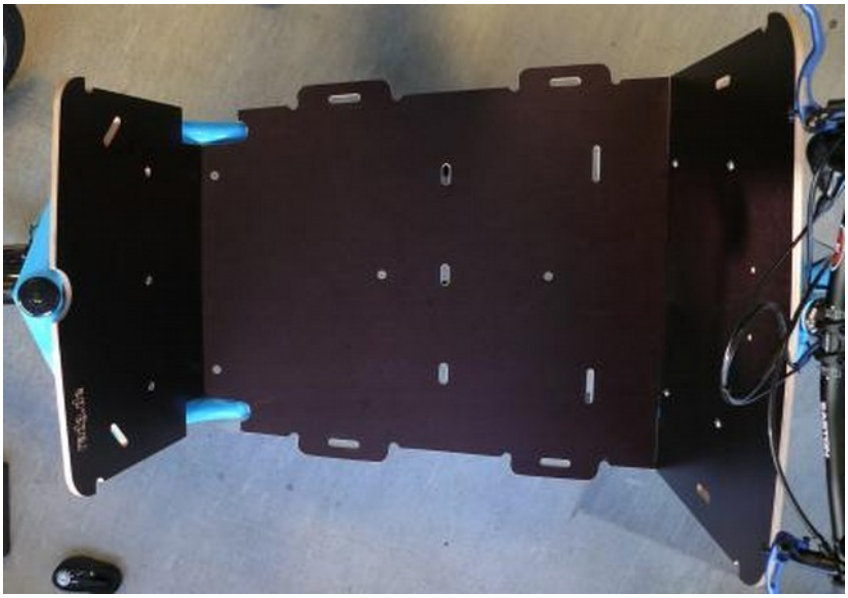

Fig. 7:
Align panels, tighten nuts loosely

After complete bolting, you can also transport bulky objects crosswise on your bike without any problems with the structure now shown here.
For the expansion to a box, continue to assemble as follows (note the points from 10 for the kids box!).

8. Insert the side panels and align them in the longitudinal axis so that you have an even projection at the front panel and rear.

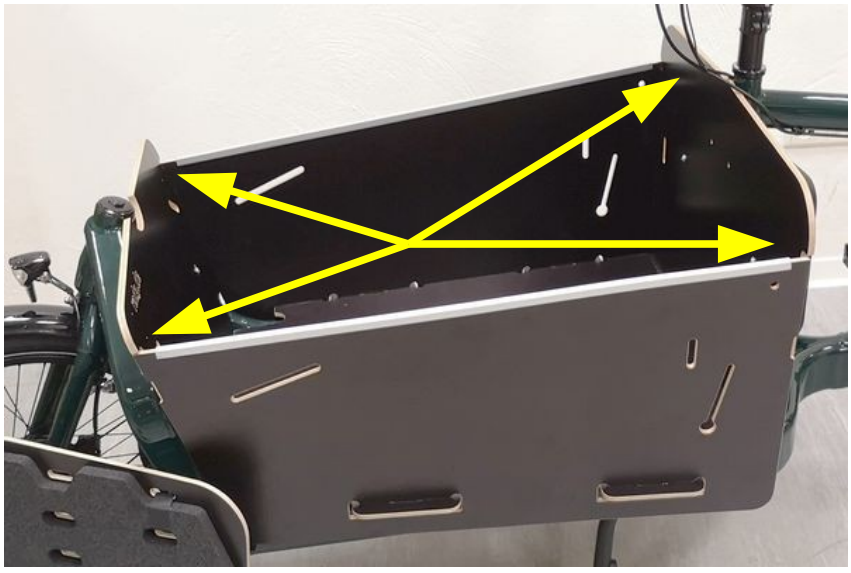

Fig. 8:
Insert side parts, tighten nuts with torque

Now tighten all the screws.
ATTENTION, the torque should be 4-8 Nm.
If the torque is too low, the stability of the box is at risk!
If the torque is too high, the plate may warp, the sleeve may be damaged or the screw may pull through the plate!

9. The straps in the backrest and the base plate

If you would like to use your box for transporting children and have ordered the seat backrest as well, you must thread the straps into the corresponding openings and insert the buckles to secure them before inserting the box as described in point 10.
You can use one strap in the middle for one child or 2 straps on the right and left for 2 children.
The shoulder straps can be fastened in 3 heights depending on the size of the child.
If possible, pull the belt through the opening first.
Please then thread the buckle as follows. This is the only way to ensure that the belt cannot slip.
The belt only goes through ONE slot, the buckle has to work as a barb.

Fig. 9-1:
Strap guide in the buckle
25mm standard strap

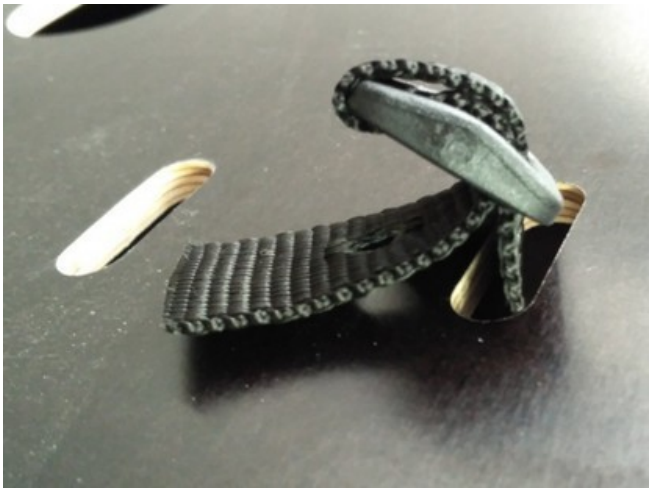

Fig. 9-2:
Belt guide on the box

Fig. 9-3:
Belt guide below for
- 25mm standard belts
- 40mm Fidlock harnesses

Fig. 9-4:
IMPORTANT for safety!
Bottom belt guide for
25mm standard belts
for a base plate with 40mm
slots

10. Now insert the backrest into the box (go tight if necessary) before inserting the side panels at the top under the notches of the front panel and back.
Please read point 9 on threading the belts beforehand!

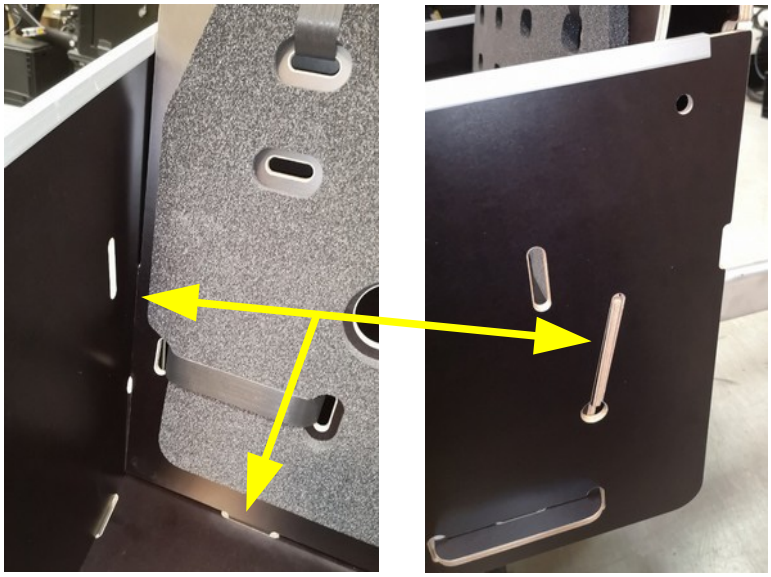

Fig. 10:
Insert seat back

Slide the side panels on top under the notches of the front panel and rear panel.

11. Now thread the belt, starting at the front and to the left, with the ratchet on the inside. As you go along, make sure that the belt does not twist.

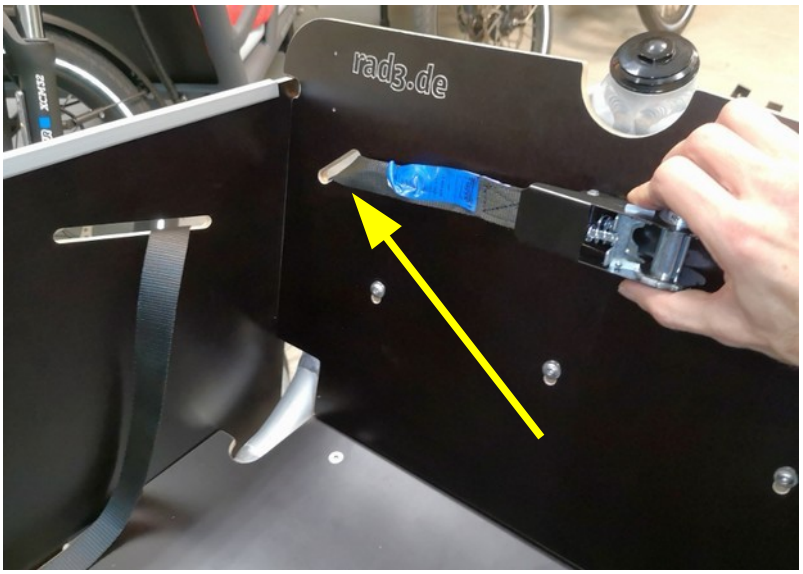

Fig. 11-1:
Thread the tensioning strap, in front and to the left

If you have installed the seat back, it must be enclosed by the belt! This is the only way to ensure that the belts are sensible and effective for your pets!

Fig. 11-2:
IMPORTANT for safety!
Thread the belt,
Include seat back

Pull the loose end from the back (right) through the ratchet and tighten the strap.

Fig. 11-3:
Threading the belt

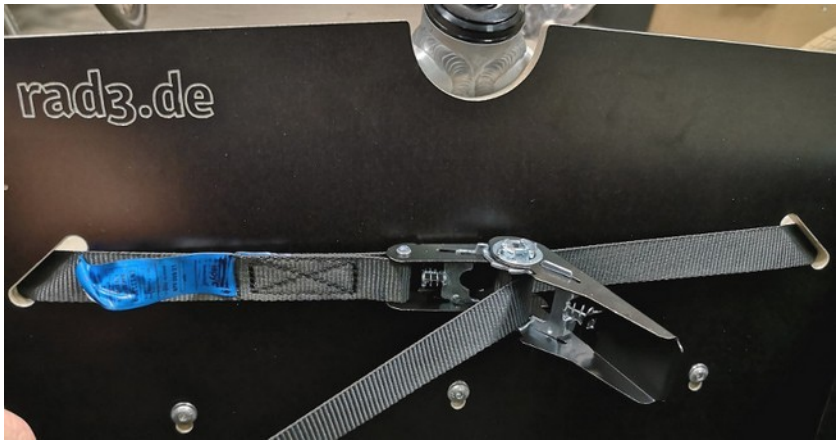

Fig. 11-3:
Tighten with ratchet

If necessary, shorten the loose end **later** and "weld" the cut edge. Leave enough tape.
(e.g. with a lighter - WARNING: risk of burns!)

12. Insert the seat cushion to fit (the red / coloured cover is an optional accessory).

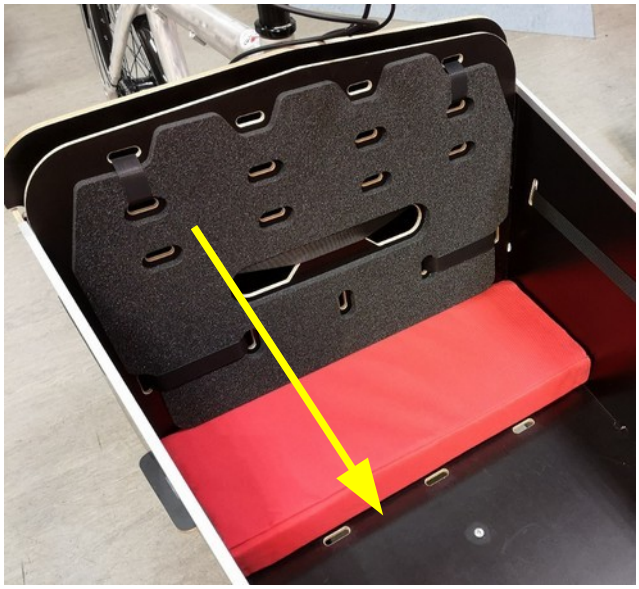

Fig. 12:
Insert cushion (shown without straps)

13. The tarpaulin

ATTENTION, if you have (also) ordered a canopy, please start with it, see point 14! If you have ordered the canopy, you must screw on the press studs.
The inner parts of the press studs may be clipped in or are enclosed. Please loosen them e.g. with the help of a small screwdriver. The matching screws are supplied 3.9 x 6.5 mm.

Fig. 13-1:
Separate press studs if necessary

Fig. 13-2:
Push buttons

Then they pull the tarpaulin tightly over the assembled box.

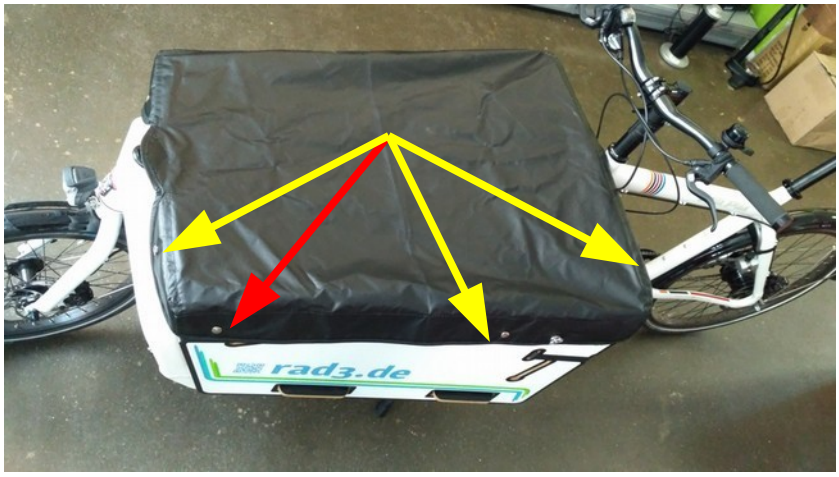

Fig. 13-3:
Pull the tarpaulin tight, press studs on the right are mirror image

Mark the centres of the press studs on the box with a suitable pencil and / or drawing pin / countersink. To do this, gently pull down on the front and back of the tarpaulin. However, you should not do this on the side walls.

Better check the position once more before you drill!

Fig. 13-4:
Mark the position of the centre point on the box

ATTENTION, the front push button marked red above is also used by the canopy. The priority is the fit to the canopy! The head is not necessarily important for the canopy.

Please pre-drill the points with a 1.5 mm drill bit. Hold a piece of wood or similar against the opposite side to avoid splintering (risk of injury).
We deliberately chose screws that are almost too long. However, this is the only way to hold the knob sufficiently tight in the thin board. If you do not drill all the way through, the last layer of plywood may lift slightly when you screw it in.
If you do not pre-drill at all, there is a risk that the button will come loose again relatively soon.

Fig. 13-5:
Pre-piercing and pre-drilling

The screwing in should be done slowly with high pressure (please do not use a cordless screwdriver but a hand screwdriver).

Fig. 13-6:
screwed-on push-button

The tarp is designed so that you can also use it as a basic rain cover for your children.
To do this, it is rolled up about ¼ of the way from the back and fastened with on the double push button (on older models with the Tenax, see photo).

Fig. 13-7:
Tenax screwed on
(photo old model)

In the end, the rolled-up tarpaulin should look something like this.

Fig. 13-8:
Tenax clipped in (old model)

Fig. 13-9:
Tarpaulin rolled up

14. The Canopy

If you have also ordered the canopy, you must also screw on the press studs and the pole sleeves at the front.
ATTENTION: if you want to retrofit an older box with the Canopy, you have to drill additional holes in the sides! This is described at the end of this chapter.

Start marking the drill holes for the sleeves as follows. The important functional dimension is the hole spacing of 40 mm in the aluminium sleeve. In current boxes this is already pre-marked.

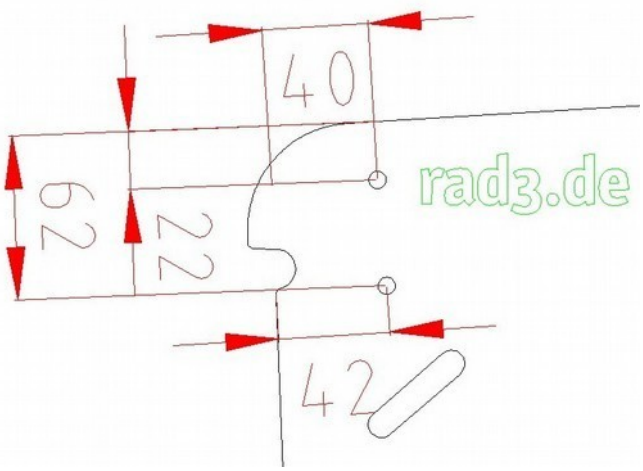

Fig. 14-1:
Dimensions of drill holes in front Distance between drill holes Nominal dimension 40mm

Fig. 14-2:
screwed sleeve

Drill on the right side mirror-inverted to the left side shown here. Use a 6, better 6.5 mm drill bit. Hold a piece of wood or similar against the opposite side to avoid splintering (risk of injury!). Ideally, you should fix the wood with a screw clamp to avoid injuries!
Dimensions 40 and 42 mm refer to the extension of the long straight edge on the left.
Dimensions 22 and 62 refer to the extension of the long straight edge at the top.
Use the M6x20 flange head bolts, the large K-washers on the outside, the small ones on the inside.

Now assemble the linkage.
By the way, this is designed with the separating points so that it fits folded into the box. Slide the long rods into the guides from below with the straight ends first. This will go quite tight the first time - that is normal.
If you want to remove the rods later, NEVER pull on the lower end but push gradually from the top downwards. Otherwise the rubber inside will tear!

Fig. 14-3:
Threading large rods

Fig. 14-4:
Threading crossbar, is usually already mounted

(small viewing window is still prototype)

If not already fitted, now insert the sail batten at the top into the "shoes" on the right and left, you must bend it slightly for this.
Then close the Velcro fastener.

If not already done, insert the side windows with the zips. It is well known that zips are often weak points. We have chosen a correspondingly robust size. Nevertheless, you should always pull carefully and not use force. Zips can be maintained with wax and made more flexible.

Now mount the M6 x 16 mm screws in the columns that guide the canopy at the back. The nuts protruding on the inside are only for positioning the columns.
The columns are now inserted on the sides under the tensioning strap and tensioned along with it.

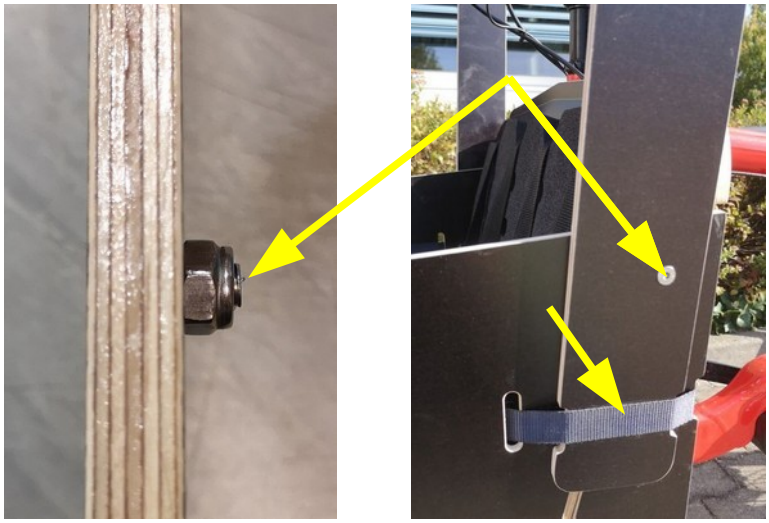

Fig. 14-5:
Insert columns

Now insert the fully assembled canopy with the rod feet into the sleeves on the front panel.

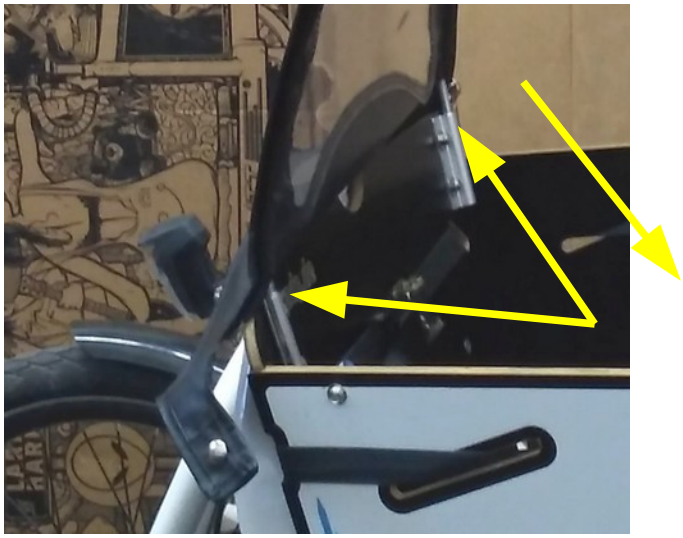

Fig. 14-6:
Insert Canopy

If you now bend it down to the pillars, it will almost have the final shape. First mark the upper push buttons of the middle section, mount them and clip them in place. Proceed as described in point 13 (Picture 13-4).
Then continue with the other press studs, at the side pieces you should pull back slightly and give tension.

ATTENTION, the screws 9.5 mm are for the columns, the 6.5 mm for the sides (only 6mm thickness!)

Have a second person help you mark the position. Place the handlebar in the uppermost position to check. Pull the canopy down so that the wooden side is just not visible in the window cut-out.

Fig. 14-7:
Pull handlebars up and shape, set first push button

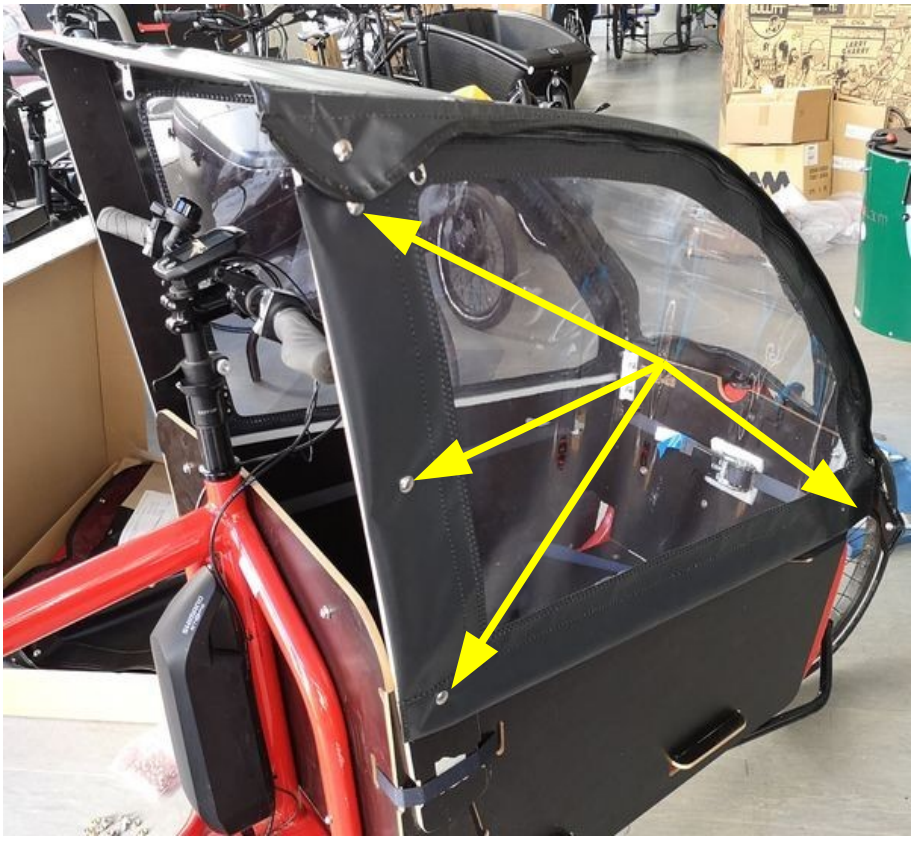

Fig. 14-8:
Pull the sides into shape, set more press studs

Finally, mark the push button at the front and mount it. There is a double push button in the side part and a normal push button in the main part.
If you have mounted the sides (normal state), the double push-button on the side part is clipped in first, then the push-button from the main part. If you are driving "half-open" without side parts, you can clip the single push-buttons of the main part directly onto the side.
This push button is also used for the canopy. Priority is given to the accuracy of fit for the canopy.

The button must pull the canopy downwards and the flaps tightly from the front to the back. Draw the position of the press studs and proceed as already described above.

Fig. 14-9:
Pull shape

Fig. 14-10:
Marking in front

Now clip in the two double press studs on the right and left.
If you remove the side windows, you can still use the push button. DONE.

Additional work on older boxes for retrofit Canopy:

You need to drill the hole in both side panels on the right and left to fix the columns, as the older canopy had a different technique for fixing.
Please measure 32 mm and 41 mm parallel to the upper and rear edge respectively.
Drill a hole with a diameter of 11 mm at the point of intersection.
Ideally, you should use a wood drill for this. Be sure to include something on the opposite side, otherwise the board will splinter!

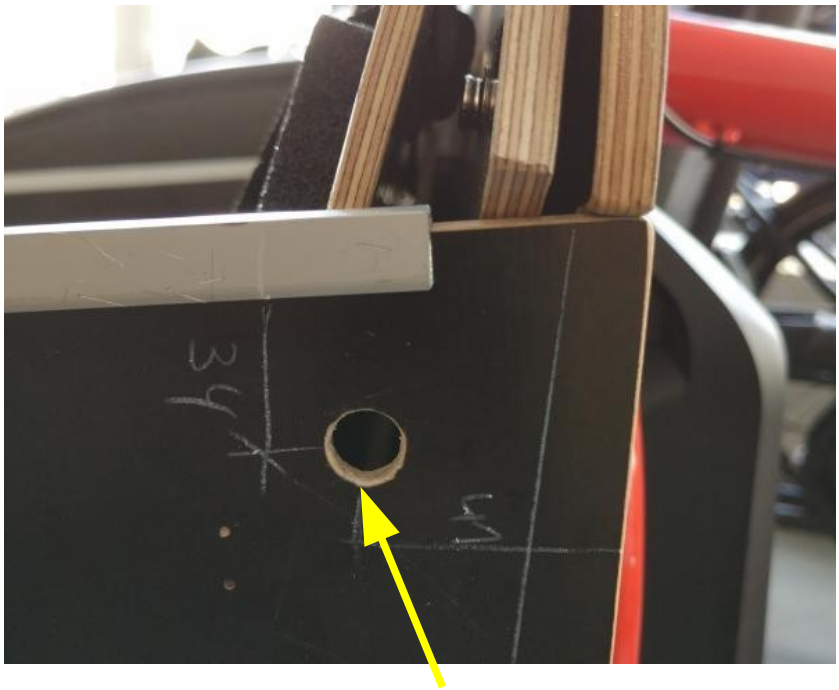

Fig. 14-12:
Drill 11mm hole

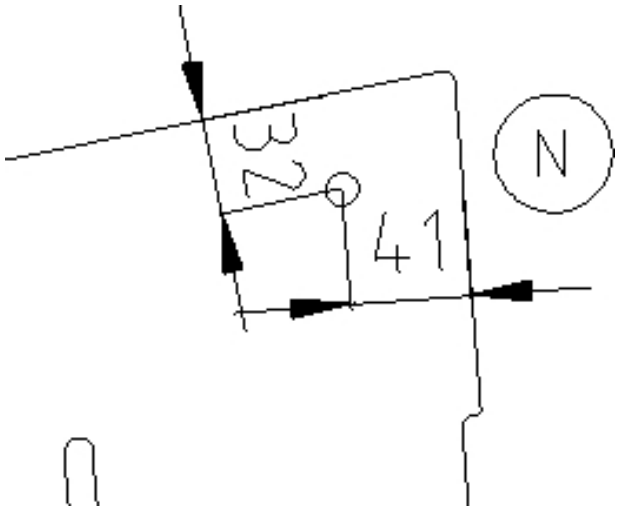

Fig. 14-12x:
32 mm from wooden edge (approx. 34 mm from profile edge)

15. Other accessories

You can fit Ortlieb outer bags to your Kids Box. These are available in sizes S and L.
Use the enclosed templates and pre-drill accordingly. In the front or rear wall with 9 mm panels you can use the original screws, otherwise shorter ones, e.g. pan head screws 3.9 x 9.5 mm.
In our suggestion, use the pockets on the back of the box facing the rider. For the eBullitt with battery, only size S makes sense to use, otherwise size L fits and fills the space in the frame completely (but also works for eBullitt).

Fig. 15-1:
Ortlieb outer bags in comparison:
left S // right L (small picture L)

Despite the Kids Box, you can use the driver bag panel - with minor restrictions in usability.

The use of a so-called Maxci-Cosi adapter (e.g. from Bakfiets.nl) is possible. Correct installation and use is your responsibility. rad3 accepts no liability.
When mounting, we STRONGLY recommend the use of large K-discs on the opposite side!
Due to the space available, only the MaxiCosi and 1 child will fit in the box. There is not enough space for a second child.

With a little skill, so-called Weber trays / Steco trays can also be used. We are working on offering a better prepared solution here.

Fig. 15-2:
Size example ONLY, no assembly recommendation

16. Further notes

ATTENTION: **Check** the straps and the tensioning strap regularly for damage!
For your safety and that of your children, you should stop using the box immediately if a strap is damaged!
The belt must then be replaced immediately.
Check the screws regularly for tightness, observe the specified torque. **Check the** plastic sleeves for damage at longer intervals and replace them if necessary.
This and any other wooden box is a resonance body and can amplify noises and creak. To prevent excessive creaking, you can rub the edges with wax, e.g. from skateboarding or candle wax.

The basic material of your box consists of waterproof glued multiplex plywood. Edges and cut-outs are treated with end-grain wood preservative, if necessary wood preservative oil against moisture.
Nevertheless, it is and remains a natural material that reacts sensitively to wetness and prolonged exposure to moisture.
Park your bike as protected as possible. If you cover your bike / the box, check that no waterlogging / condensation forms under the cover.
You should treat the edges again regularly, e.g. once a year. You can obtain the original protective agent from us or directly from the manufacturer (link on the website, Remmers, currently http://qr.remmers.com/p/3777).

You can always download the latest document from our product website.
https://rad3.de/produkt/kidsbox-bullitt/

If you would like further information or have any questions or comments for us, please contact us by email at dialog@rad3.de.

We wish you a safe journey and lots of fun with your rad3 Bullitt Kids Box!

custom Bullitt