

# ENC EggShell Camera Bag - DIY photo camera bag

## How to make a photo bag - which is better than what you can get in stores?

When you think of a photo-bag you'll think of a compromise: the more you like it the less expensive:) Seriously, when you get your favourite bag you'll still be facing a problem: it's not safe.

### What?

Yes. Not safe. There'll be advertisements about protection of dust, water, heat, anything - but still if you happen to drop it it'll cause very serious damage. Even dropping the camera from like 1 meter can be a very big accident. There's of course reasons why you don't really have to face this severe vulnerability of being fragile.

Here they are:

- Some stuff like very cool lenses (like the L series in Canon) can endure quite a shock if they have to.
- Most camera bags are not that heavy. Stuff in them is not that heavy. So a collision won't be such a big deal - even the very thin shock absorbent layer can do miracles.
- You basically never drop your equipment.
- Usually you only walk with your equipment so the hazard is very-very low.

There's however a few circumstances that can dramatically change this "lucky" situation.  
here they are:

- if you buy more expensive stuff (lenses, more bodies) and your bag becomes bigger and heavier.
- if you happen to ride your bike (bicycle) instead of going everywhere by car
- if you start thinking what you can loose if shit happens to your bag :)

Maybe you don't need a better or/and bigger bag than what you have, but in case you do, here's what an ENC EggShell camera bag is offering for you:

- cheapness
- bump protection
- good style

ENC EggShell stands for "Eggshell Is NOT Commercial" (like LINUX - Linux is not Unix :))

It basically looks and works like a bike messenger bag ...

A BIKE messenger BAG

PLUS

a semi-firm "eggshell" in it (could be a cardboard box or something made out of cardboard) and some CLEVER padding in the "box" (of whatever kinda shape- of course it's good if it follows the shape of the rounded bag)

## THAT'S IT

- a (soft) bag

- a box (rounded shape) IN IT

- a padding IN IT

(in the end you'll add some padding outside too to make your bag more comfortable :))

very simple, very cheap, very effective ....

Interested?

okay ... make a step - to step TWO :)

## ----- **STEP 2** -----

Hi!

Welcome to step two :)

here's how you can make your first ENC EggShell camera bag

1. decide how much room you'll need for your stuff, how you'd like to arrange your equipment in the bag
2. you make some sketches ... (dimensions)
3. do some shopping
4. borrow a sewing machine for a few days
5. MAKE IT :) - 1rst the BAG
6. MAKE the INNER boxes & padding

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### 5. MAKING IT - THE BAG

advice:

use white soap or chalk for drawing on the material

1. make some last checkings on your sketches
2. draw the lines on your material ...
3. check them ... (have somebody with you for that 10 minutes)
4. cut it up for the shape (according to the dimensions you want)
5. cut the square bottom to be round shaped at the front of the bag ..
6. cut out material for the pockets you plan to have .. (2 side and 1 front)
  
7. okay ... deep breath ...
  
8. **sew** the stuff you need to have on the front pocket ...  
(one part of the buckle, light reflecting material, some utility to host a RED bicycle back-light, maybe more, som velcro stuff for anything for the future)
  
9. **sew** front pocket on the material ....

10. **sew** anything you want to have on your bottom part (some velcro, or/and some kind of stands)
11. **sew** the stripe on the bottom of the bag (outside:))  
NOTE: leave some room, don't go all the way to THE EDGE
12. **sew** the FRONT-SIDE part's "bottom side" to the BOTTOM
13. **sew** the FRONT-SIDE part's "side side" to the SIDES  
  
----- now it's gonna be more difficult since it's put together :)
14. **sew** the stripe to the sides
15. **sew** the side pockets to the sides ..
16. **sew** the d-ring on the end of the stripes (one part of the stripe is finished now - the part that's fixed to the bag)  
  
----- NEW START THINKING HARD - cause you're getting really close ...
17. **sew** anything you plan to to the TOP part (stripe and bucket, light reflector, velcro, etc)
18. FINISH the top
19. do the other part (the mobile part of the stripe) ...  
  
----- OKAY - DONE!!!! STOP NOW :):) -----

## ----- **STEP 3** -----

### ----- **MAKING** the boxes

here you can really start using your very own creativity  
Still you might need a few advice ...

PADDING isn't equal to "sponge"  
shock absorbing is a very delicate and interesting material ...

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you should do a google search on:

"shock absorbing"  
"egg drop" + maybe experiment  
"protective packaging"  
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## ----- the BOX itself -----

the "box" or "boxes" could be made of a variation of materials ..

I made a box for the middle and two kidney shape "boxes" for the two sides.

The middle part is made of 2 layers of very light, flexible but break-resistant see thru plastic (its structure is cardboard boxes' - like "H" on its side :)

for the sides I made the "boxes" using epoxy and fiberglass (the fiberglass material, it's like canvas that falls apart - is a pain in the ass to work with - but in the end no big deal - and you'll just have made a FIRM and light box for YOURself)

but almost anything can serve as a material or one of the materials for your "boxes" - that's why I just call them "boxes" - to really simplify it ... so .. let's get to the padding - in the boxes :)

## ----- the PADDING in the BOXes -----

shock absorbing is more complex than you'd think ...

at first you think you're gonna use lot's of "sponge" - and you'd be SO WRONG

"sponge" is actually not a thing ...  
we're talking about FOAMS

there is polyethylene, polypropylene, polyurethane  
they are all different ...  
also there's open and closed cell versions of each of them

Don't worry it's still simple .. very simple ....

the STUFF you use could be either  
- "springy" (like kicking back, springing back swiftly) polyethylene  
or  
- "softish" (like a soft damper) - polyurethane, closed cell

if we think of a child jumping on a bed

springy is like the child will be in the air after the first jump  
softish is like the child won't be in the air at all - or just a little bit

the softness and springiness of the "sponge" is only illusion ...  
it's very soft - if you drop something on a 2,5 cm (1 inch) thick sponge it'll hit the desk thru the sponge and it'll only kick back a ping-pong ball :)

what you need is polyurethane ... which is SOFTISH (very good shock absorbent)

but also you'll need some QUICK stuff - like sponge - or rather polyethylene, closed cell  
you need this because the key thing is ACCELERATION ...  
that's what you don't want to expose your camera to

if you only use a very good absorber ... polyurethane foam (closed cell)  
it'll totally absorb the shock - BUT will do this in a very short way ...  
so if this STUFF is on your desk, and you drop like a bottle of water (half a litre in it or more), it won't actually hit the table (you won't feel the bump of the table) BUT still the way will be very short so it's bumping into a table - but to a soft one

what you need is absorbing in a rationally long way

## **PRACTICALLY**

you can make very many experience .. but in the end it'll break down to a very simple thing  
let's say you have a thickness available .. let's say: 3 cm more than 1,2 inches that's your "BUDGET"  
how are you going to spend it?

all polyurethane?

all polyethylene?

mixed? (yes, but it depends - you can get all kinds of polyethylene foams so maybe you won't need the polyurethane at all)

Polyethylene (an average one) gives you a long way - a light confrontation ...  
so 3 cm of it might be not long enough that is a BUMP in the end ...

of course there's foams with many-many characteristics ...

(let's say your polyethylene is very "springy" - in that case the way will be too short ..)  
(now we are thinking of some common sponge foam, a soft one ...)

so in my bag there's a 1 cm layer of it - and it gives some allowance to your precious "package"  
(bodyguard slang)

and two 1 cm thick polyurethane to make it a sandwich ...

polyurethane is not springy - so if you keep stuff on it it'll deform permanently - but as long as it's "fresh" it'll absorb shock very well ... and it costs almost nothing to change it every 2 years or so ...

so this is the bottom of my bag ...

in the sides I have like a 1 cm thick polyurethane (2 layers of 0,5 cm - 0,2 inch) layer all around the boxes ..

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this is outside ...

and I have padding in the boxes too (of course)

the problem is that even if you have a good cushioning around your bag if you put your stuff in a hard box inside - it will bump hard into this box ... (so watch out, this is a trap when working on your concept)

you should concentrate on the "egg drop" situation ... (you can even test it - put a nylon bag around the

egg in case it breaks:))

so the boxes inside should be deep enough, well cushioned enough in themselves  
and the cushioning around the box(es) will "only" make it easier for the box ...  
it'll make the box fall on soft - so things in the box will start from a much better situation ..

there's one more thing: the size of the surface, the area by which the precious thing bumps ...  
if it's a long lens in a standing position ... it'll need at least double thickness of absorbent stuff at the  
bottom since the area will be half of the side area - it's not this simple but still, smaller area will  
definitely need more thickness ....

what I'm saying is that you should definitely think a little bit on your concept .. and make egg tests :)  
because it's very easy to make a mistake ..  
like making a 5 cm (2 inches) padding around the box - and a 1 cm padding in the box ..  
so if you drop the bag - the box will be fine ... but maybe not the stuff i the box ..  
so it should definitely be the other way around - rather 5 cm inside and 1 cm outside :)  
(also - the padding around the box is 75% for the softness of the bag - for your comfort :))

so when you have the clever padding (double thickness where the bumping area is like half - standing  
telephoto lens) you only need some material that covers the boxes fro inside ...

----- as for this inside covering material ..

- ANTIstatic material is a blessing !!!
- GOOD color is a blessing too - black is BAD:)
- silk is VERY BAD !!!!!!!! (silk is, yes very soft - but TOO SOFT - and let anything just slide out of  
your bag - VERY BAD .... even to think of the chance :)

it should be no glossy but "matte" - grey is great - I use lemon-green (greenish-yellow eye-blinding  
material - like the color that skiers' or divers' suite has)  
the point is that it should not be silky but also it should not be rubbing your lenses as a sand paper :)

well that's about it ....

one more tip:  
if you put some velcro on the bag (the soft part not the hard one) you'll be able to attach light reflecting  
material lemon or orange even daily - and if it gets dirty you can detach it and wash it in 10 minutes :)

such light reflector AND ALSO fluorescent material on your bag can save your life ten times a day !!!  
the reflector is only useful in the night so the fluorescent one will be also necessary anyways ..

well - what can I say ...?  
GOOD LUCK & HAVE FUN :)

Peter

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**PS:** my first camera bag I bought was for a videocamera ... (my photo camera was small and hard that time - a Praktika)

I bought a hard case ... it was so beautiful - because it was all rounded at all the corners ... and also the thin metal wall of it was covered (outside) with stylish grey canvas ... it was fun to wear it ... fun to use it ... fun to even look at it ...

the camera inside was sitting on a "sponge" bed - and had a safety belt :)

I was very happy with that camera and if it had broken I couldn't afford to get a new one so I loved the idea of protection ...

I used them for like 3-4 years - and never had anything even close to dropping or bumping or anything

..  
But ... one day .. ordinary day .. I just stepped on some ice (yes, it was winter:)) and before even thinking my feet were like at the height where my head was supposed to be .. and 1 second later I open my eyes on the icy ground remembering that I just bumped into the ground full throttle - oh my god! The camera ! Well - it was safe and sound - nothing happened - I mean nothing to the camera in the box :)

now shall I explain how easy it is to make a dive with a bicycle? I mean not even necessarily your fault ... one moment you're on it - the next you're down ... wit your camera and all your precious equipment .. so that's how you should think about the EggShell Cam Bag :)

if you don't go by bike - I mean never .... then okay ... sort of okay ...

but if you sometime get on a bike ... please wear a helmet - and give your equipment a helmet too - an eggshell Cam Bag :)

it's very cheap, very-very beautiful, and very-very protective ...

(i do some roll skating and I'm very happy with my knee and elbow protectors too ... I do not fall a lot but when it happens even if imagining that all that impact you had on your knees instead of the cheap plastic protector around it - and you'll be SHOCKED)

En EggShell Cam Bag is easy to make - and also you can make it any size ... (I'm starting to make my second one tomorrow - to have a smaller one in which I'm not gonna carry everything but only the most necessary stuff)

I do have a smaller bag - a good one, from the store - a commercial one:)

I got it for a small video camera but my photo camera fits into it okay ... (its an eos with a big 17-55 2.8 IS)

but if it bumped into something it'd have very close to zero protection ... and I don't want that ...

so I'm making a new one tomorrow ...

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