

INSTRUCTIONS FOR YOUR B&W FILM DEVELOPING DIY KIT

Your developing kit contains:

- A changing bag**
- A Paterson 2-reel developing tank**
- 1L Cinestill DF96 Monobath**
- A roll of black and white film**
- A short length of practice film**

Not included: scissors, running water.

These instructions are very detailed, but don't get spooked: we've made them comprehensive to avoid any surprises, and most of the steps will become second nature with a few minutes of practice. We've also produced a short video that will walk you through many of these steps. It's on our Youtube page here: https://youtu.be/6a-cT_9pp5k

We recommend that you watch the video and read these instructions twice: Once before you begin, so that you can get an idea of how all the pieces fit together, and once while following along.

And now, without further ado, here's how you develop your own film.

GETTING TO KNOW YOUR ROLL OF FILM

These instructions are here so you understand how your roll of film is put together, but the actual film preparation will happen later in this process. DON'T TRY TO GET YOUR FILM OFF THE ROLL UNLESS IT IS IN THE CHANGING BAG.

FOR 120 FILM

120 film is packaged onto an open spool in two layers: The outer layer is a lightproof paper meant to keep the film in the dark, and the inner layer is the actual film, where your images are recorded. These two layers are attached at one end by a strip of tape. Because you'll be separating these layers by feel, it's important to know how to tell

which is which: the most obvious difference is that the lightproof paper tends to be thinner than film, though the difference can be slight. It's worth noting that the lightproof paper will also crease more readily when bent; the film tends to flex rather than crease. And the lightproof paper is longer than the film, as it wraps around the spool a few extra times.

FOR 35MM FILM

35mm film is packaged in a lightproof metal or plastic canister, so there's never any doubt which part is film and which is packaging. But it's a bit more challenging to get it out of the canister. You can theoretically open the canister with a bottle opener, but many bottle openers aren't effective at this particular task. The quickest way to open up a roll of 35mm film is to peel it open: find the felted slot that the film end normally comes out of, poke at it with your finger until you can grab hold of the edges, and pull the two sides apart. It doesn't take much force, and you don't need any extra tools. You might remember when you loaded your film into your camera that the very end of the film isn't straight: it's cut into a swoopy shape to help with loading. So, in addition to extracting the film from its cassette, you'll need to trim the end of the film straight before loading it into the reel. You do this by holding the film flat between your middle and index finger to create a straight line, cutting along the line formed by your fingers with the scissors. Before you start developing film, try trimming the practice strip included in this kit so you can feel more comfortable doing it.

HOW TO USE THE DEVELOPING EQUIPMENT

STEP 1: OPENING THE TANK

Take the tank out of its box and remove the transparent plastic wrap. On the very top of the tank is a black flexible plastic cap: you can set this cap aside (we won't need it for these instructions). Under the flexible plastic cap is a hard plastic lid that looks like a funnel. There is a small rod in the centre of the funnel: we'll need this later in the developing process, so take it out and put it somewhere you can find it. You can open the developing tank by giving the funnel lid a twist counterclockwise. It's not a screw top, it's a click-lock, so you'll feel a bit of resistance before the top unlatches. Lift off the top and set it aside for now. Inside the tank, you'll see two film reels held together on a hollow spindle. The spindle is not attached to the rest of the tank, so you can pull out the whole assembly in one piece.

STEP 2: THE REELS

The reels are held onto the spindle with friction only. Slide one of the reels off the spindle and have a look at it. The inside of the reel is a long spiral track that will hold your film. Around each side of the reel, there are two slightly angled sections with little metal balls trapped under them: this is the starting point of the spiral. If you hold each side of the reel and give it a little twist, you'll notice that the two sides will twist relative to one another. This twisting action is what we'll use to load film into the reel.

STEP 3: FURTHER ADVENTURES WITH THE REELS

If you twist a little bit further, you'll feel a click and the two sides of the reel will unlock. Pull the two sides apart and you'll see that there is a "long" half (the one with the tube attached) and a "short" half (the one that slides over the tube.) Set aside the short half and take a peek at the long one: on the tube, you'll see one long slot that goes all the way down its length, and three shorter slots that go around its circumference. These three shorter slots let you set the reel to accept different film formats. If you are loading 35mm film, you should reassemble the reel so that it locks together on the narrowest setting; if you are loading 120 film, you'll want to lock it together on the widest setting. Try it now: slide the short half onto the long half and try locking and unlocking it at all three settings. When you feel confident that you can lock and unlock the reel, set it to the correct size for your film and move on to the next step.

STEP 4: LOADING AND UNLOADING FILM

Now let's practice loading film. First, get your short strip of practice film from the package. Next, pick up the film reel and locate the angled sections on the rim. Twist the reel so that the angled sections are lined up. Holding the reel in one hand, insert the end of your practice film under the angled sections, just past the little steel balls. You can probably feel that those little steel balls are grabbing onto the very edge of the practice film; when you let the film go, it should stay attached to the reel. If the film falls back out, try pushing it in again a little bit further. You only need to insert it a few centimetres. Try to get used to the feel of the film being "grabbed."

Once you have the film inserted, hold each edge of the reel so that your thumbs rest on top of the angled sections and begin gently twisting the edges back and forth. You'll notice that the twisting action draws the film into the reel. If the film isn't moving, try pulling it out and reinserting it. Be sure that you're inserting the film into the space between the angled section and the steel balls.

Once you've wound the film onto the reel as far as it will go, it's time to practice unloading the film. Twist the edges of the reel past the click stop and pull the halves apart slightly. Retrieve your strip of practice film and click the two halves together again.

Repeat the loading and unloading steps a few times with your practice film until you're comfortable with the process.

STEP 5: PUTTING IT ALL BACK TOGETHER

The last step is putting the film reel back into the developing tank. Locate the tank spindle from **STEP 2** and simply slide the reel back onto it as far as it will go. Then, place the spindle and reel assembly back into the tank, and place the tank lid back on top. Rotate the tank lid clockwise until it click-locks back into place. Practice this a few times to get the feel of it.

Your tank can hold one reel of 120 film or two reels of 35mm film. If you're processing 120 or a single reel of 35mm film, be sure that you remove the second reel from the spindle before inserting the reel holding your film.

STEP 6: NOW DO IT WITH YOUR EYES CLOSED

With real film, this loading procedure happens in the changing bag, out of sight- so we need to learn how to do it by feel.

Pick up the reel and close your eyes. Run your thumbs over each side of the reel and see if you can feel the angled areas you identified in **STEP 2**. Once you've figured out how to find the angled areas by feel, give the reel a slight twist and practice lining the angled areas up, like you did in **STEP 4**. Once you know how to line the angled areas up, we can try loading the practice film (you can open your eyes now)

Put the reel and the practice film side by side in front of you. Close your eyes. Pick up the reel with both hands and feel for the angled areas; now, line them up. Hold the reel in one hand and pick up the practice film. Slip the end of the practice film under the angled sections and feel the steel balls grab on. Now, hold the reel with both hands and place your thumbs on the angled sections. Start twisting the sides of the reel back and forth to draw the film into the reel.

Peek as often as you want: that's why we're practicing with our eyes closed instead of in the changing bag. Do this a few times and you'll find it only gets easier.

When you're feeling good about loading the reel, try putting the reel back into the tank and closing the top with your eyes closed.

Finally, try putting the practice film, reel and tank into the changing bag and putting it all together in there. Do this a few times and you'll be all set to start processing your own film.

Next, the changing bag:

STEP 7: USING A CHANGING BAG

A changing bag is a two-layer fabric bag with a double zipper closure and elastic-banded openings for your arms- it looks like a big floppy t-shirt without a head hole. It's a portable darkroom, designed to let you transfer film from the roll to the developing tank without exposing it to light. To use the changing bag, unfold it onto a flat surface and unzip the inner and outer zippers. Place your film, developing tank and scissors inside, and then do up the zippers again. That's it.

If you wear a smartwatch, or any watch with an illuminated display, remove it before using the changing bag. Light from your watch will wreck your film.

ACTUALLY DEVELOPING YOUR FILM

STEP 8: GET EVERYTHING READY

Find yourself a flat, dry surface. Collect your film, developing tank, and scissors and place them within reach. Grab your changing bag and lay it out on the surface.

Unzip your changing bag and put the film, developing tank, and scissors inside. Zip up the changing bag.

STEP 9: PREPARE YOUR FILM

With everything inside the changing bag, feel around in there and get used to where everything is. If you're having trouble situating yourself, open up the changing bag and take a peek. Try opening and closing the developing tank; try working with the film reels. Try taking everything apart and putting it all back together again. Be sure to zip the bag closed again before you begin the actual process.

When you're feeling good about it, it's time to open up your film.

If you are using 35mm film, pick up the cassette and feel for the felted slot. When you find it, push in a fingertip or two and try to pull the edges apart. You should be able to peel the film cassette open and extract the film on its inner spool. Once you've extracted the spool, set the metal cassette aside somewhere on the periphery of the changing bag, so it doesn't get in your way. Trim the end of the film straight using the scissors, then set the scissors and the trimmed end off to the side.

If you are using 120 film, feel around the roll until you locate the end of the outer paper. This will be sealed with a little paper strip or sticker, which you can break with a fingernail. Separate the film from the paper and spool; now, push the paper and film spool off to the periphery of the changing bag so it doesn't get in your way.

STEP 10: LOAD THE TANK

Now that you have the film ready, do exactly what you practiced in **STEP 6**. Take your time and don't rush it. Make sure that the film is in the tank and the tank lid is closed. Then, take the tank out of the changing bag. Set the changing bag aside.

STEP 11: DO THE ACTUAL DEVELOPING ALREADY

Be sure that you have your loaded developing tank, stir stick, and Cinestill DF96 nearby.

Open up the Cinestill DF96 and pour the liquid into your developing tank until you can see the liquid level through the centre hole of the developing tank. Re-cap the Cinestill DF96 bottle and set it aside.

Put the stir stick into the centre of the developing tank. Give it a couple of twists to make sure it's seated and to provide a bit of initial agitation.

At room temperature, Cinestill recommends 6 minutes of developing time with minimal agitation. Every 30 seconds, give the stir stick a few gentle twists to agitate the film and chemistry.

Developing times will vary with temperature. Cinestill DF96 instructions (including times for warmer or colder conditions) are available at this link: shorturl.at/pMRW8

When 6 minutes have elapsed, you can open the film developing tank. We need to pour the Cinestill DF96 back into the bottle, so do this: first, open the Cinestill DF96 bottle. Now, take the lid off the developing tank and place it like a funnel into the opening of the Cinestill DF96 bottle. Pick up your developing tank and pour the contents gently into the funnel lid. When the developing tank is empty, put it down and re-cap the Cinestill DF96 bottle and set it aside.

Take the open developing tank to a sink and rinse the film with running water for a few minutes.

STEP 12: RINSE & DRY

Pull the film reel out of the developing tank and remove the reel from the tank spindle. Set the spindle and tank aside. Now, as in **STEP 3**, twist the film reel until the two sections separate. You can then pull the film off the reel and hang it up to dry.

You can use clothespins to hang the film from any convenient surface: a floor or ceiling lamp, a clothesline, a coat hanger. Clip an extra clothespin to the dangling edge of the film to keep it hanging straight down. Film will dry completely in 8-10 hours.

Remember to wash your hands and clean up any spillage on your work surface. Rinse off all components of the developing tank and set them aside to dry.

That's it- you did it. You've just developed your own negatives.

You can scan them, rephotograph them, print them optically, or take them to a lab for professional scans. If you have any questions about the developing or scanning process, feel free to get in touch with us at (250) 382-6838 or by email at info@camera-traders.com. You can also stop in to our shop any time during business hours for a chat.