PhotoCentriC

presents the latest development in
photopolymer plate making equipment

imagebox®

Thank you for buying imagebox, the world's *most sophisticated, economically priced* stamp making machine ideal for craft and business use; specifically designed to be used with imagepac®,the world's fastest, cleanest and most convenient polymer process.

Owner's Manual

Product Features

Fitted with imagebright that enables the production of stamps of a quality that exceeds that of most commercially sold ones.

Designed for imagepac, the easiest, cleanest, fastest and most convenient way to make stamps.

£$€

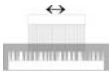
The most cost effective, high quality exposure unit currently available in the world.

Print negatives directly from your computer onto a laser or ink jet printer using imageblack film.

Unique design features provide even exposure across the entire bed.

Simple magnetic clamping system with quick opening and closing at the squeeze of your finger tips, providing perfect imagepac compression.

Portable digital timer.



Quick to wash-out polymer.

Make business stamps with imagepac xtra.

Make super clear non-yellowing craft stamps with imagepac.

Quality is so high that you can even make stamps from photographs.

Contents

imagepac

imagepac is the world's first commercially available pre-packaged sachet of liquid photopolymer resin. imagepac xtra is the world's first commercially available pre-packaged sachet of liquid photopolymer resin incorporating a substrate.

It's a completely new way to manufacture stamps giving you all the benefits of using polymer without the drawbacks. It is now no longer necessary to construct a polymer plate out of the four components (substrate, damming tape, coverlay and resin) you can do all of that by just taking the sachet out of the box! imagepac gives you the finished article of a printing plate prior to exposure, in one easy to use package.

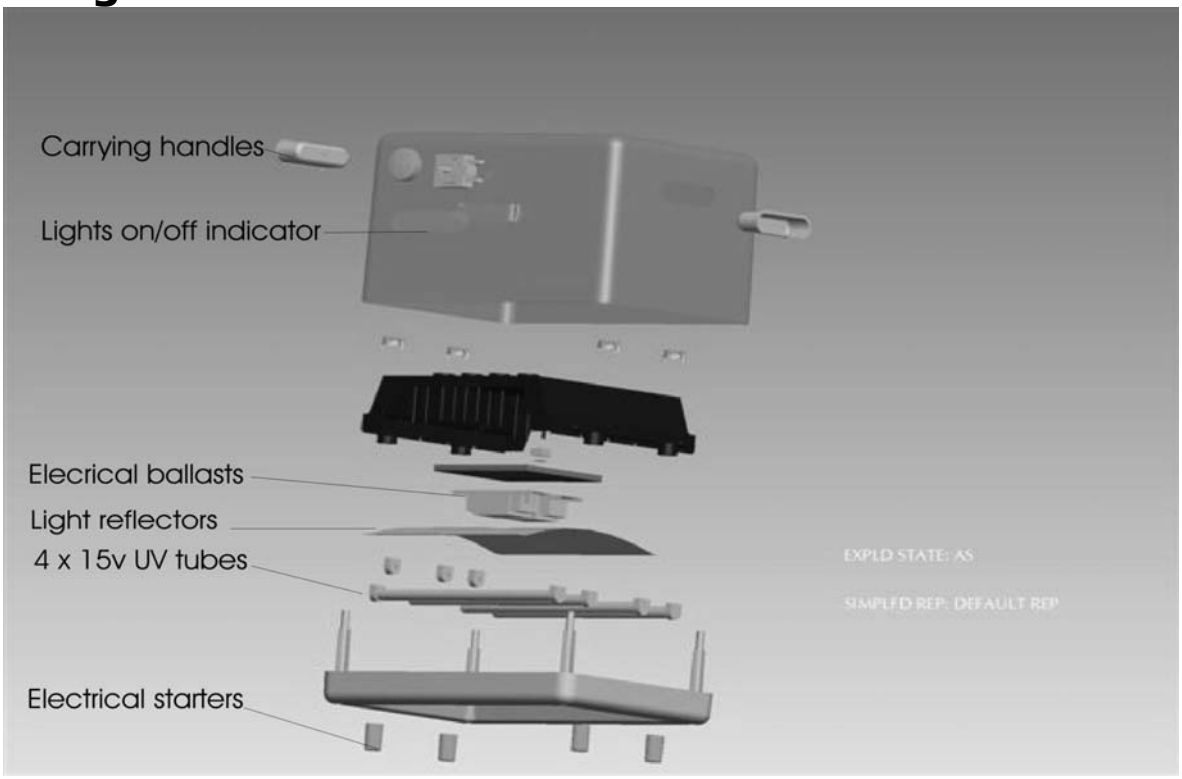
imagebox provides the user with the fastest way to make perfect polymer plates. The complete process, from laying down the negative to picking up the finished plate ready for mounting takes about 20 mins.

imagebox provides the user with the simplest method of polymer plate manufacture. There is no need to handle resin drums, decant photopolymer, lay coverlay, pull vacuum, place damming tape, pour resin, prick air bubbles, lay backing sheet… all this achieved by simply lying the imagepac over the negative. There are no screws and clips to tighten, just drop the magnetic acrylic sheet on top and the imagepac self-levels, accurately giving you a stamp sheet to your desired plate thickness. There is no simpler method of polymer plate manufacture in the world!

imagepac is patented in the UK under GB2372575
imagepac is patented in the US under 09/985034
imagepac is patent pending in Europe under 02 755 145.6

Specification

imagebox



Lamps	4x15W tubes non-symmetrically placed.
Size	487mm (W) x 355mm (D) x 273mm (H)
Plate size max.	US legal or A4 (340mm x 220mm)
US version:	Power supply 110V 60Hz
European version:	Power supply 240V 50Hz
Weight	4.54kg

Clamp

Two piece acrylic clamp with 12 pairs of 8mm magnets to compress imagepac.

Base side is fitted with opaque coloured bearers to prevent light ingress at sides and maintain level floor.

Base side is fitted with an imagebright collimating filter that redirects the incoming light to present it within a 30 degree to the vertical angle.

Size external	280mm x 405mm
Size internal	240mm x 363mm
Weight	2.69 kg

Also included in the exposure unit package are a retractable knife, a de-tack tray and a brush.

Installation

Setting up imagebox:

Remove packaging and store for future use in case you need to move the exposure unit in the future.

Install, store and use where it will not be exposed to temperatures below freezing or exposed to the weather.

In countries where there are areas which may be subject to infestation by cockroaches or other vermin, pay particular attention to keeping the appliance and its surroundings in clean condition at all times. Any damage which may be caused by cockroaches or other vermin will not be covered by the product guarantee.

Place exposure unit on a level surface.

Ensure that you have enough space on your worktop next to the imagebox to place the clamp when you want to turn it over.

Do not use the exposure unit on a surface that may be damaged by prolonged exposure to UV light such as a polished wood.

Electrical connection:

Most electrical appliances should be placed upon a dedicated circuit: that is a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits.
Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electrical shock or fire. Periodically examine the cord of your imagebox, and if its appearance indicates damage or deterioration, unplug it, discontinue use and have the cord replaced with an exact replacement part by a qualified electrical engineer. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to keeping the imagebox and its surroundings in a clean condition at all times.

Installation

Unauthorised servicing of the equipment invalidates the warranty. Read this Operational Manual before use.

Plug safety details:

This appliance must be earthed.
It must be fitted with a 13A fuse.

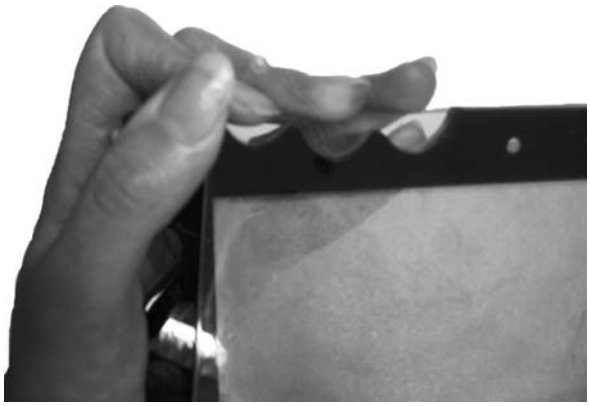
Installing the bulbs:

imagebox takes 4 x 15W bulbs.
Ensure the electrical supply is disconnected.
They are inserted by aligning the tube in the tube holders. Gently press each tube home at either end. Twist them to either side so they lock in the housings.
U.V. light is harmful if viewed directly. Do not look at light emitted from the lamps.

The clamp:

Unpack the clamp. The clamp compresses your imagepac photopolymer pack evenly to ensure that your stamps are level and it removes light from between the artwork negative and the photopolymer pack that would interfere with the image. It is made from rigid acrylic and has two parts; an upper side that is a simple magnetic sheet and a lower side that has bearers (that govern the thickness of the stamps) and imagebright fitted to it.

Open the clamp by sliding it apart. Do not try to pull the sides apart as the sheets will be too hard to separate.
Hold the clamp at the corner and using the finger holes push one side across the other until the magnetic attraction has been broken.
Whilst opening rest it on a desk to ensure it doesn't fall.



Installation

imagebright:

imagebright is our unique form of image enhancement. It is the silver layer in the base of the clamp. Conventional exposure units all have multiple tubes that shine light in all directions, not just directly down where you need it. The light also then reflects off the sides and provides scattered light that enters the negative at all angles. This is bad for holding crisp detail (as it overexposes and makes the lines bolder) and is bad at preserving the reverses (as it fills in the small areas of black on your negative) as the light entering the clamp nearly parallel to it solidifies the polymer that should be liquid behind the black areas. This makes exposing a plate in a conventional machine difficult in that there is a correct time above which the plate is not under-exposed (wavy fine lines that do not ink well) and a correct time under which the plate is not over-exposed (fat lines with no open reverses).
imagebright re-directs the light to ensure that the only light that enters the negative and then reaches the imagepac does so at the vertical or at 30º to the vertical. This guarantees that you hold an excellent image of everything that is on the negative whilst at the same time making it virtually impossible to over expose the plate. So unlike in a conventional exposure unit, imagebox can be exposed for the correct amount of light or more than that amount without negative side-effects. A particular benefit of this is that the exact calculation of the main exposure is no longer necessary.
imagebright improves the image on fine reverses to such an extent that it allows the stamp maker to hold fine tonal work such as half tones or photographs. Photographs would not be possible to be made into stamps using a conventional exposure unit.

Stamp making process:

Make the negative
Sandwich the imagepac and the negative in the clamp.
Expose the floor or support layer to your stamps.
Turn it over and expose the image side to the stamps.
Cut the imagepac open and wash the image side.
Post expose the imagepac.
Cut and present for sale.

Making the negative

The first step to making your stamps is to convert your artwork into negative format.

Negatives are made by delivering black ink or toner by your printer onto clear transparent film. The blacks and whites are reversed from how you would conventionally look at them. All the areas that are clear on your negative are where the light will get through and will harden the gel in the imagepac, these will end up transferring ink in your stamp design. All the areas that are black in your negative will stop light getting through, under here the liquid in the imagepac will remain liquid and be subsequently removed in washing and will be the floor or support to your stamp.

Modifying artwork to make a negative:

1. Greyscale the image to remove colour.
2. Adjust the brightness and contrast to maximise the whiteness and blackness. This is not necessary if the design has been created in 2 bit black/white such as in Word using a black box and white font. Otherwise it is important to make the design compose of solid black to stop light and bright white to leave the film clear and let light through.
3. Reverse the colours, to make blacks white and whites black.

Standard image in greyscale

image with blacks and whites enhanced

image with colours reversed (negative)

Making the negative

You can scan, create or download your drawing from the internet. Ensure that you are not infringing copyright.

Making a negative using software packages:

Microsoft Word (only really practical for text stamps)

1. On the main tool bar click **Insert** > **Text box** and open a horizontal or vertical text box.
2. Click on the border of the box and right click to open the menu.
3. Select **Format Text Box**.
4. Click **Colors and Lines** > **Fill** > **Colour** and select black, the box will then be turned black.
5. Position your cursor in the box, on the main tool bar click **Format** > **Font** > **All text** > **Font colour** and select white. You then write in white on black.

Adobe Photoshop

1. Select **Image** > **Mode** > **Grayscale**.

For photographs only you need to apply a filter:

Select **Filter** > **Sketch** > **Halftone pattern** (this gives a dotty effect)
Adjust **Pattern type** to **Dot**
Select **Size = 1 or 2** and increase the **Contrast** to suit.

or **Filter** > **Sketch** > **Stamp** (this gives a simple hand drawn effect)
Adjust the **Light / Dark Balance** and **Smoothness** until you have produced a suitable image.

or **Filter** > **Sketch** > **Photocopy** (this gives a photographic effect)
Adjust the **Detail / Darkness** to suit.

or you can try **Plaster** which gives an interesting artistic effect, **Bas Relief** which gives your photograph a line effect, **Texture** where you can adjust the grain size or three of the **Pixelate** functions are good, **Color Halftone, Mezzotint or Pointillize.**

2. Select **Image** > **Adjustments** > **Invert**.
3. Select **View** > **Proof Setup** > **Working Black Plate**.
4. Select **Image** > **Adjustments** > **Brightness/Contrast**.

Increase the contrast and reduce the brightness until the image is as black and as white as possible.

Making the negative

Corel Draw

1. Create your image, scan it or download it.
2. Select **Bitmaps > Mode > Grayscale** (8-bit).

For photographs only you need to apply a filter:

Choose **Line Art, Jarvis or Halftone** or experiment with other filters. Increase **Threshold** value until you have produced a suitable image.

3. Select **Effects > Adjust > Brightness-Contrast-Intensity** and increase the contrast and reduce the brightness until the image is as black and as white as possible.
4. Select **Bitmaps > Mode > Black and White** (1-bit).
5. Select **Effects > Transform > Invert**

Microsoft Paint (not ideal for modifying drawings)

1. Create your image, scan it or download it. Choose black and white images with clear distinction between black and white.
2. Select **Image > Invert Colours**

Paintshop Pro

1. Select **Image > Grayscale**.

For photographs only you need to apply a filter:

Select **Effects > Artistic effects > Halftone** and in Cell Properties select 'round' and 'size 2', adjust to suit.

2. Select **Adjust > Brightness and Contrast > Brightness/Contrast** and increase the contrast and reduce the brightness until the image is as black and as white as possible.
3. Select **Adjust > Negative Image**.

Making the negative

Creating stamps from photographs:

Photographs have very fine definition and are the hardest images to make a stamp from, this is why you will very rarely see photographs on rubber stamps. However, because your clamp is fitted with imagebright you can make photos into stamps. You can scan printed out photos or load digital ones, always take portraits against a white wall. To make the stamp image clearly you will need to use a filter to produce distinct dots of black and clear instead of continuous greyscale. Filters are just a way the computer treats an image, it changes the image from continuous colour to small dots or lines of distinct colour or whiteness. The smaller the filter dots, the finer the image, but it may not ink up well, the larger the dots the easier it is to ink up but the image will be cruder. Too much black on your artwork will just produce a stamp with large areas of white on it. Too much clear on your artwork will produce dark faces lacking in features.

General information:

All printed negatives will break down after repeated use (probably about 10 exposures).

The black in your artwork should be solid; white flecks in the black will let the light get through and you will not get enough depth to your stamp.

Extend the black around your design by about 1cm to keep the stamp depth constant around the edges.

Printing the negative

Using a pen:

Use a permanent ink pen on a transparent sheet. You can trace around shapes or designs that you want to make into stamps and then fill in the area surrounding the image in black. You must draw the 'negative' of the image that you want to create, that is make all the areas black that you want to be clear and leave the areas clear that you want to ink up.

Using an ink jet printer:

Ink jet printers have the highest resolution and are commonly sold for home use. Nearly all ink jet printers will make a negative that is black enough. However, the ink is expensive and the negatives will scratch easily and are not waterproof.

1. Use imageblack ink jet film, it will print much blacker than OHP film. It has a coated side that will stick to a wet finger.
2. Set the ink density to maximum if possible, this is usually in the printer properties.
3. Select the colour black Cyan/Magenta/Yellow cartridge instead of the black cartridge. Your black artwork will have a blue or red hue when examined against the light.
4. Select the paper setting that delivers most ink, often this is not transparency, but is Photo Paper Matte, Brochure Paper or Other Speciality Paper.

Using a laser printer:

Laser printers are very economical, the output is scratch and water resistant. However, not all laser printers will print black enough. Some can be enhanced with toner density spray, the HP range can be simply enhanced by wiping with white spirit and heating with a hot air gun. Our recommendation is to use the HP1022 (1200 dpi) or failing that the HP1020 (600dpi).

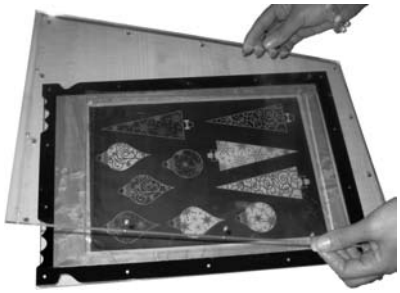
1. Use our special imageblack laser jet film.
2. Print and enhance the side you printed on with toner density spray or in the case of the HP, white spirit and heat from a hot air gun.

Placing the negative & imagepac in the clamp

Open clamp by pressing the sides apart at one of the corners.

Lay the imagebright side of the clamp on a table so that the magnets are facing upwards.

Place a negative in the clamp so that its reading side is facing upwards.



Lay the desired size of sachet down on top of the negative.

Lay the upper side of the acrylic down on top so that the magnets join together.

Press down on the clamp in the middle to remove any creases and air from the imagepac.

Standard pack sizes:

imagepac	Inner seal Dimensions	Workable Dimensions
A4	218 x 296mm	208 x 286mm
A5	218 x 146mm	208 x 136mm
A6	109 x 137mm	102 x 130mm
A7	109 x 70mm	102 x 63mm
A8	70 x 50mm	65 x 45mm

imagepac *xtra*	Inner seal Dimensions	Workable Dimensions
A4	215 x 301mm	210 x 297mm
A5	215 x 147mm	210 x 143mm
A6	105 x 137mm	102 x 134mm
A7	105 x 66mm	102 x 63mm
A8	70 x 55mm	64 x 44mm

Exposing in your imagebox

Place the clamp on your table so that the imagebright and negative are at the bottom and the imagepac is at the top.

Place the imagebox on top of the clamp.

Set the timer to the *Floor Exposure Time*, press the timer and at the same time turn on the imagebox light switch.

When the timer sounds, lift off the imagebox and place it to the side, turn the clamp over so the imagebright side is now at the top.

Place the imagebox back on top of the clamp.

Set the timer to the *Image Exposure Time.*

When the timer goes off for the second time, lift the imagebox off again and turn the imagebox switch off.

Typical exposure times:

Exposure times vary with the thickness of the imagepac, the colour and whether it is for craft (imagepac) or business (imagepac xtra) use. Use these numbers as a guide only:

Floor Exposure Time Between 30 secs and 1min

This time governs the depth of floor. You can reduce it to give your stamps more relief, however the lower the floor the more likely it is that you will have thin wavy lines or dots that fall off, you can correct this by increasing the image exposure time.

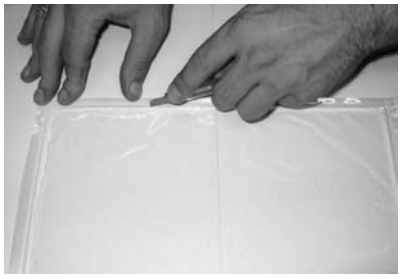
Image Exposure Time Between 8 min and 12min

This time governs the image of your stamp. If the stamp is underexposed (wavy lines or parts missing) then increase this time.

Washing out and hardening your imagepac

Remove the imagepac from the clamp. Press it between your fingers, you should feel solid firm image surrounded by deep liquid. If the solid part feels soft and squishy then your Image Exposure Time needs to be longer. If the liquid part does not feel deep enough then you need to reduce the Floor Exposure Time.

If the imagepac feels OK then cut it open with the knife provided. Cut around the edge of the imagepac, just in from the seal. You only need to cut the outside layer of plastic, do not cut right through both sides. Take care when using knives.



Remove the cut rectangle of plastic and throw it away.

Place it in a sink with some hot water in, quirt a generous amount of a good quality washing up liquid (dish soap) on top and brush in a circular motion. Then run it under the hot tap, squirt more detergent on and brush again. Repeat until clean, rinse and check that all the liquid has been removed.

Place a teaspoon of the de-tack salts in the tray provided. Add about 1cm (1/2”) of water and dissolve the salts. Avoid contact with the salts as they are an irritant. Place the plate in the tray, ensure it is covered by water and place the imagebox on top. Turn on the lights and set the timer for 10 minutes.

Dry your imagepac stamp sheet and it ready for use or sale. You can cut your stamps up. imagepac xtra (for business use) have a rigid sheet that is permanently attached to back of the stamps, imagepac (for craft use) have a naturally sticky back when the rear plastic is removed.

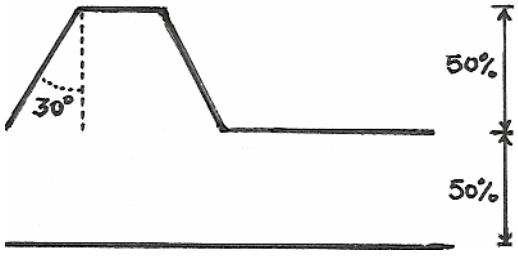
Good stamp making guide

A good quality stamp plate will transfer the finest relief images, such as full stop, whilst still holding fine reverses, such as the centre of a small 'a' or 'e'. It will also produce a perfect representation of the tonal shades, transferring the correct amount of ink. It will have enough relief depth to prevent the stamp base from back-filling with ink. It will be resilient to repeated use over the years, providing the same image after 100,000 impressions as it did on day one.

The ideal plate should have a floor at between 1/3 and ½ of the total plate thickness so that fine relief holds under compression. The relief on a photopolymer printing plate is formed when the light penetrates through the negative. Because the curing mechanism for photopolymer is inhibited by air, the relief is actually formed on the floor and the upper film simultaneously eventually meeting in the middle. This is why an underexposed dot will be concave.

To hold fine detail on a negative, increase the floor and reduce the main exposure time. Maximum printing values of imagepac plate exposed on an imagebox exposure unit:

Screen Values at 150 lpi	3% min and 85% max
Fine line/reverse line widths	0.1mm
Reverse/isolated dot diameter	0.2mm
Type size/ type size reverse	3 pt



Storage and Safety Procedures

Store your imagepac packs in the black box that they are supplied in, at between 5°C to 30°C. imagepac is very sensitive to light, it will even harden in indirect sunlight so do not leave the box open. Always store and transport the box level. Store the box near to the imagebox exposure unit to minimise distance required to carry sachet. Hold sachet by the seal and let it fall to avoid damaging it. Do not press your nails into it or grip it in the middle.

Polymer may cause irritation. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. It is recommended that you wear gloves when washing out the imagepac plate.

Waste water with polymer discharge has been analysed by the UK water authorities and has been determined as suitable for discharge down the drain, you should establish whether it is suitable for disposal down your drains.

De-tack salts may cause irritation. Avoid contact with skin and eyes. Rinse plates before using.

Do not eat, drink or smoke when using polymer. Consult MSDS for detailed health and safety information.

In case of fire, do not breathe fumes. Work in a well ventilated area.

Trouble shooting guide

1. Little or no character relief on stamp	a. Floor exposure too high b. Negative not black enough c. imagepac already exposed to light d. Check second image exposure was with negative at top	Reduce floor exposure by 30 sec See 2. Store imagepac away from light, cut and wash out rapidly. Floor exposure has imagepac at top, image has negative at top.
2. Negative not black enough	a. Ink jet negative not black enough b. Laser negative not black enough	Increase ink density, change paper setting to Photo Paper Matte, Brochure or Speciality Paper, Print in CMYK. Not all lasers work. Use toner density spray or turpentine and heat. Buy HP1022.
3. Image washes off or thin lines are wobbly	a. Image exposure too short	Increase image exposure by 3 mins.
4. Stamp is sticky after post exposure	a. Plate not fully de-tacked. b. Plate not fully covered in water. c. Bulbs too old.	Use de-tack salts in the water tray. Increase post exposure time. Add more water to tray. Change 4 bulbs.

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