Cibachrome—Ilford’s prints-from-slides system—was recently improved with a mark II version. John Wilmott tries it out.

PHOTOGRAPHERS are difficult to please. Especially those who dabble in the darkroom. When Ilford brought out the excellent Cibachrome-A system in 1976, it wasn’t long before the experts made their voices heard. The main complaint with this prints-from-slides system was contrast, which was too high for many people’s liking.

Ilford looked, listened and hopefully learned, and introduced Cibachrome-A II, not only improving contrast but improving the quality of the whole process.

Now Cibachrome is faced with a home darkroom onslaught from Kodak’s Ektaflex and Agfa’s forthcoming Agfachrome-Speed. How does the latest Cibachrome stand up for itself?

How it works
Cibachrome II is a different process to the original Cibachrome—the two are not compatible. The new three-bath process is called P-30.

Cibachrome is a silver dye-bleach process. There are three emulsion layers, each containing a dye which is sensitive to its complementary colour, eg, the layer with yellow dye is sensitive to blue light.

When exposed, a latent image forms in each of the layers. Blue and blue-containing colours are recorded in the blue-sensitive layer, and so on. The result is a negative silver image when developed. In the bleach step, the dyes in each layer are bleached in proportion to the amount of silver in the developed image. Finally, in the fixing bath, all the remaining silver is dissolved and removed during washing. You are left with a pure dye image which is a direct positive of the original transparency.

If all that sounds a bit scientific, you certainly don’t need to memorise it to make a Cibachrome print!

Basically, all you do is insert your slide in the enlarger, expose the material, and develop, bleach, fix and wash.

Cibachrome can be processed at temperatures from 20-29degC, although the standard recommendation is 24degC.

This is conveniently low for a colour process, but you’ll still need some form of water bath or dishwarmer to keep the chemicals at the correct temperature.

Ilford recommend that processing is carried out in a drum, but it can also be with trays, as in normal black and white printing.

Exposure
Cibachrome material should be handled in total darkness. Set everything up so you don’t have to fumble around in the dark. Any border on the print will come out as black, and a thick black border can look very heavy. Borderless prints are generally more pleasing.

It is quite difficult to recognise the emulsion side of the material in the dark. The emulsion side is a bit smoother, and the material is always packed with the emulsion facing the label on the inner foil bag. With practice, you can tell which side is which.

You can make a test print just as you would for a black and white print, but remember everything works in the opposite way as you are printing positive-negative and not negative-positive.

This means that the more exposure you give the print, the lighter it will become. Consequently, you’ll need to burn-in where you would dodge a black and white print.

Now to the stumbling point of all colour printers, filtration. You will be pleased to know that you can virtually forget it with Cibachrome. On the packaging of your material are filtration values for various film types (these values alter from batch to batch so there’s no standard). The film types are Kodachrome, Ektachrome, Agfachrome, Fujichrome and now Ilfochrome.

Set this filtration on your colour head, or put in the appropriate filter pack, and expose. Nine out of 10 prints will not show any noticeable colour cast. During testing, I even forgot to dial-in any filtration at all and still got a perfectly acceptable result. This is because, unlike neg-pos colour printing, the material has a wide filtration latitude.

A typical exposure using a Durst 650 colour enlarger with 50mm f/2.8 lens and standard 100W bulb was 10sec at f/11. You’ll obviously need to find your own yardstick. Exposure latitude is very good, the material will take a reasonable amount of under or over-exposure.

After exposing, the print should be loaded into a processing drum and the lid screwed on tightly.
Above: Good neutral grey tones, plenty of sky detail and an accurate green are shown in this print. The lighter left-hand side of the print was dodged during exposure to even up tones. Picture by Ron Patient.

Right: A first-time print using the filtration recommended on the paper packaging. Colour is surprisingly accurate, though a little juggling with filtration would have been necessary for a spot-on colour match. Picture by David Yendall.
Drum processing

The best way to begin is to use a drum, so you can work with the light on and concentrate on temperature and time control. Make sure the drum is the right size for the paper.

Chemicals should be mixed in advance and stored in full, tightly capped bottles. Warm them to the right temperature in a water bath before you start processing. The chemicals are quite easy to mix.

Presuming you're processing at 24degC, you should pour in the required amount of developer and rotate the drum evenly for 3min. A motorised base makes things easier and leaves your hands free.

Development time and temperature is fairly critical, but there is more leeway with the bleach and fix steps.

Just before the three minutes are up, pour away the developer and immediately pour in clean water at the processing temperature. After a 30sec rinse, this can be poured away and the bleach poured in.

Again, the bleach time is 3min. But make sure it is at least 3min. It's difficult to overbleach and it's better to be safe than sorry.

Fixing time is also 3min and again is not too critical. After fixing, give the print a 3min wash in running water. So that's 3min all the way through, apart from the rinse, which makes the process very easy to follow.

At 20degC, the processing time for each step is 4min, and 29degC, it's 2min. However, stick to 24degC if

Left: Good detail in both shadow and highlight areas in this print. Clean, bright whites and deep blacks, plus a full range of mid-tones are evident, texture is rendered very well. Picture by Wout Steenhuis.

Below left: A fairly accurate blue obtained using the recommended filtration. Some of the brightness of the original transparency has been lost, but the white rope has remained clean. Picture by Wout Steenhuis.

Below: A wide range of tones and colours were no problem to Cibachrome. A small amount of shadow detail lost here, but colours are rendered accurately. Picture by Geoff Prestwich.
possible, and if you are a beginner.

With a standard drum taking one 8 x 10in sheet, you will need about 75ml of solution for each step, which makes chemical usage quite economical.

Drum processing is fairly slow, as you have to wash and dry the drum after each print is processed. It's better to use a drum which will take two full bleach, care not to contaminate one tray and agitated for another.

Wear rubber gloves and take great care not to contaminate the fixer while in the fix, the tray and agitated will start to saturate, and will be brought out fully in the wash.

Cibachrome prints can look a little muddy when wet, so assess colour balance in daylight when dry.

Tray development means you can be exposing the next print while the first is washing—or even bleaching. You can put two or more prints through the process at one time, but make sure each is in full contact with the chemicals at all times.

Using trays means prints-per-hour output can increase vastly. But don't attempt it unless you're sure you know what you are doing. Please note that Ilford recommend drum processing for Cibachrome.

Quality
The old Cibachrome wasn't bad at all. The new stuff is marvellous. Contrast is still quite high, but much more mellow and pleasant than its predecessor. Colours are true and accurate, and that includes greens and blues. Saturation is excellent if your exposure is right.

Sharpness is very good indeed. Highlight and shadow areas are recorded exceptionally well—look at the detail in the shot of the foreign market, in the clothing and shadows.

We used the glossy Cibachrome for our test. Although it's more expensive than the alternative Pearl, most people seem to prefer the high-gloss mirror finish.

Although the emulsion is soft when wet and quite easy to damage, glossy Cibachromes are tough when dry. The base isn't paper, it is polyester and you need to be a Charles Atlas to tear one in half!

What about cost? A two-litre pack of chemicals, sufficient for at least 13 8 x 10in prints, will cost about £7.95. Ten sheets of glossy 8 x 10s will cost about £9.85. You can buy larger packs which are better value, and you may find prices cheaper than these if you shop around. What this means is that an 8 x 10in print will cost a maximum of £1.78. That sounds a lot, but compares favourably with other processes, and with care you'll get a low failure rate.

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IF YOU PRINTED IT, WOULD YOU STILL HAVE A PRIZE WINNER?

Anyone who gives the thumbs down to our question has clearly never seen a Cibachrome-A print.

The emulsion in Cibachrome includes highly purified azo dyes. They produce colours which are as brilliant and saturated as in any transparency. Directly from the transparency.

They also minimise light scattering. Giving a sharpness and definition as outstanding as the original’s. And a tonal range which loses none of the original subtleties.

With only three steps, there are just twelve and a half minutes between a slide and a superb final Cibachrome print.

And Cibachromes couldn’t be more final. They resist fading around four times longer than conventional prints.