EPSON DS-50000 SCANNER

Global Emergent Media Lab

How to start the scanner:
The scanner is activated by pressing the gray power button (leftmost button) for a few seconds until the Ready light begins to flash.

It is also possible the scanner has been put in Wake-up/Sleep Mode. If it is in this mode, the corresponding button will glow fluorescent green. Hold this button until the ready light turns back on in order to wake the scanner.

## What program controls the scanner?
With the scanner on and connected to the computer (it should always be plugged into the first slot on the USB 3.0 Hub) you are almost ready to scan.

The application "Epson Scan" should be available on your dock.
If not, go to "Applications">"Epson Software">"Epson Scan".

How to use Epson Scan:
Epson Scan is a fairly simple tool, not unlike mac's built in "Image Capture" utility.

Three Modes:
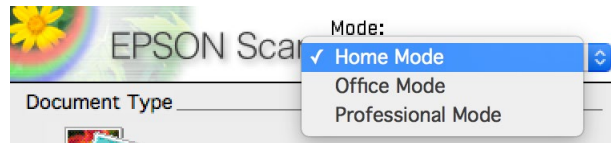
Home mode is pretty well suited to scanning if you are not in need of advanced options. Professional Mode gives you complete control over your scans and crop areas. (Description of this mode follows the description of home mode.)
Office mode is not recommended.

Home Mode:
This mode offers you simplified scanning options, which some users may find more easy to understand.

## Home mode is controlled by four sections of the control interface:
Document Type
Image Type
Destination
Image Adjustments
Preview/Scan

First you will have to select a document and then hit the Preview button.

Image Type:
This give selection over whether to scan the image as color, grayscale or black & white. Choose between color or grayscale depending on whether your image is color or grayscale/black and white. DO NOT use the black and white option.

Document Type
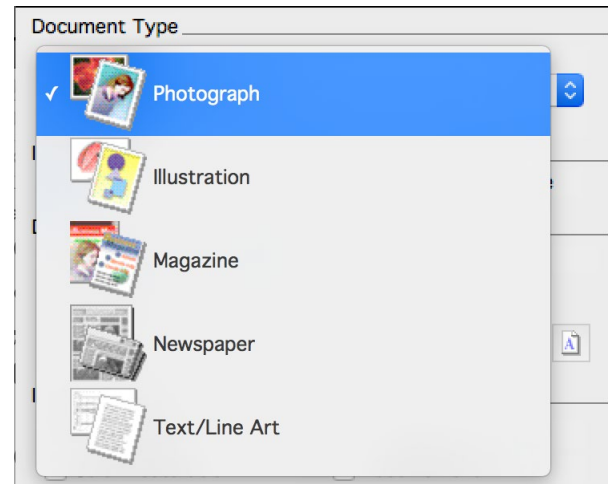
Photograph: The scanner assumes a single glossy photo document to be scanned, it will auto crop to the photo after you hit preview.

Illustration: It is expecting something less glossy than a photo, it will give you the option to set the "marquee" yourself after you hit preview. (You set the marquee by clicking and dragging a selection over the part of the scan area you want scanned.)

Magazine: It is expecting something semi-gloss like a magazine, it will automatically apply the "Descreening" Image adjustment in order to avoid grain and moiré typically associated with magazine printing.

Newspaper: It is expecting a black and white newspaper, or something printed on a similar paper to news print. It defaults to grayscale and applies "Descreening" in order to compensate for grain/moiré.

Text/Line Art: It is expecting a black and white printed document. Do not use this mode.

Destination:
This control allows you to set your quality settings, thus it is referring to "Publishing Destination" not "File Destination.
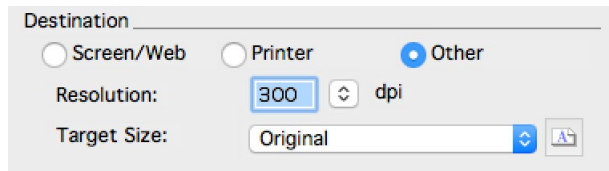
Screen/Web will produce a file slightly over the average dpi (dots per inch) of computer displays. (Default is 72, Scan is 96.) This provides a small file size, however the image will also be small itself.

Printer will produce a file suitable for most conventional (non-professional) printers. At 300 dpi this will reproduce the document accurately on most photo printers.

Other allows you to set the dpi manually, here are some suggested use settings:

OCR Text Scanning: If you want to be able to use software that automatically recognizes text in an image and makes it selectable, you want to scan at 400 dpi minimum.

High Quality Printing (at the same size): If you intend to have the image reprinted on a professional printer then either contact the printer and ask for a suggested dpi or scan at 600 dpi.

Enlargement: If you are attempting to reproduce the file at a large size than the original you can boost past 600 dpi. Note that the optical maximum of the scanner is 600dpi, so it will be using some software assistance to generate the output file, but the results are better than attempting to do so in most other software.

Do not change the "Target size" from original.

<u>Image adjustments:</u>
These adjustments are automatically applied or restricted by the software in this mode based on the Document Type you previously selected. (This is not the case in Professional Mode.) Also note these all increase scanning time.
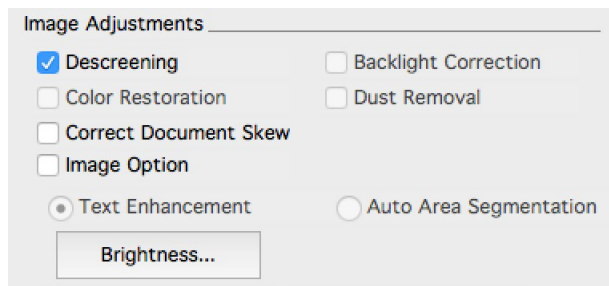
Descreening: Corrects for grain and/or moiré that is generated by some printing processes. It may make the resulting scan look "soft", if so repeat the scan without descreening selected.

Color Restoration: This essentially attempts to automatically color correct a faded looking image. I would suggest correcting it manually in Photoshop instead.

Correct Document Skew: Attempts to correct skew (rotation) in the source image. This is useless in Home Mode, I suggest adjusting your document on the scanner or in Photoshop afterwards depending on the cause of the skew.

Image Option: This enables the two options bellow it "Text Enhancement" and "Auto Area Segmentation". Text Enhancement attempts to make text sharper during the scanning process. Auto Area Segmentation allows you to select the black & white option while having the program delineate photos in the document and scanning them as grayscale. I would avoid this as the black & white function produces horrible results.

Backlight Correction: Attempts to compensate for backlight photos during scanning. Again, I would suggest doing this in Photoshop, but you can attempt to do it here if the photo is very badly backlight.

Dust Removal: This attempts to digitally remove small to medium dust particles from your scanned document or image. It can be very useful if you are not well versed in image retouching in Photoshop, however it does not always work on larger specks of dust, it is suggested you scan a version with and without this on and pick the better result.

Brightness: This gives you access to a brightness and contrast control.

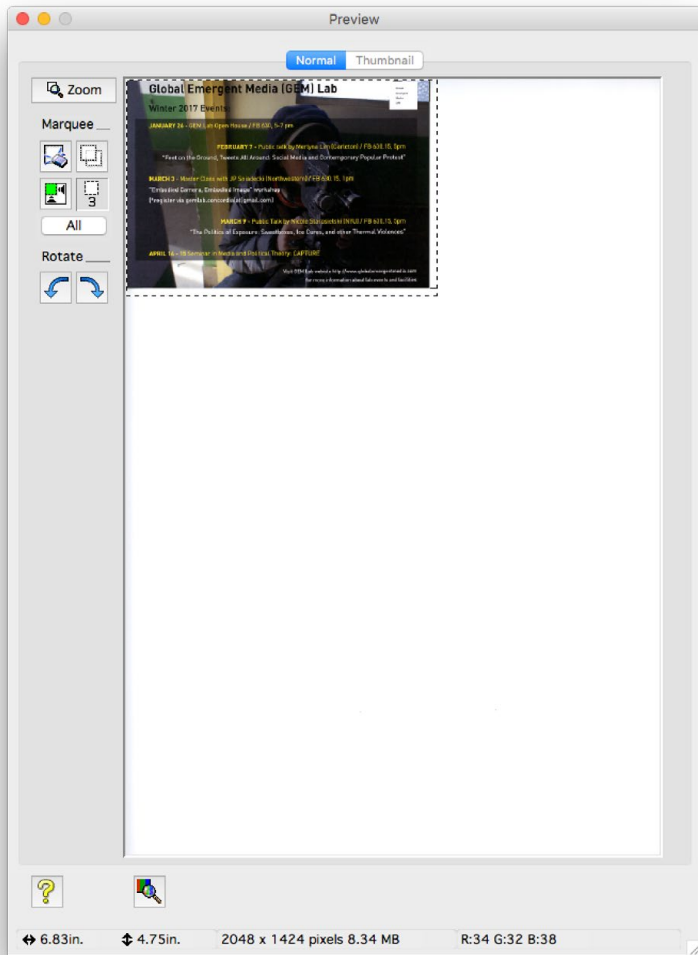<u>Preview / Scan / File Destination</u>

Preview is one of the first things you press in the program, to get the preview image of your scan and activate the Preview window where you can set your marquee.

Scan will automatically open the File Destination window and when you click ok it will start the scan. If the file destination window doesn't open, make sure to click the File destination button and select the "show this dialog box before the next scan" box at the bottom of the file destination window.

File destination will allow you to change those settings before scanning.

Preview Window:

The tools on this window are fairly simple. **Clicking and dragging will allow you to set the marquee manually (this is heavily recommended.)**

The Zoom button will rescan and zoom to an area focused on the marquee.

The buttons under "Marquee" allow you to delete your set marquee, copy the selected marquee, allow the program to automatically set the marquee (not recommended) and displays the number of active marquees.

Rotate allows you to change the orientation the scanned file will appear in.

Note that the preview scan is always low dpi and is not representative of the actual quality of your final scan.

The yellow question mark opens the help menu.

The Button next to it is the Densitometer. This allows you to move your cursor over the image and see what the initial RGB value of the area is and what the scanned image's RGB value will be. This can be useful if you are using brightness and contrast to modify an image, as a tool to see how far you are pushing the image.
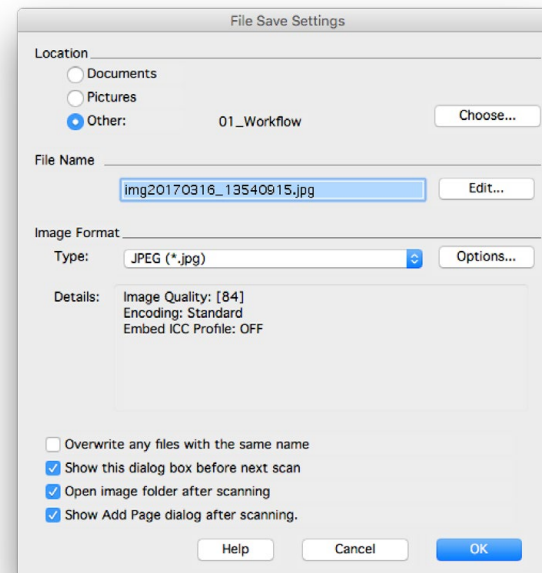
Finally at the bottom it displays:
The size of the image scanned (in inches)
The pixel dimensions of the image to be created (affected by dpi.)
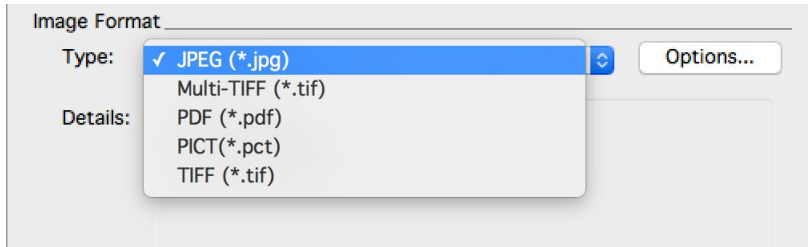The size of the output file (in MB.)

<u>File Destination Menu</u>

Location: Where your image will save. Always set to Other and pick your drive or SAN project folder.

File Name: Leave as is, you cannot write in a name, only change the prefix or numbering scheme. If necessary rename your file post scanning.
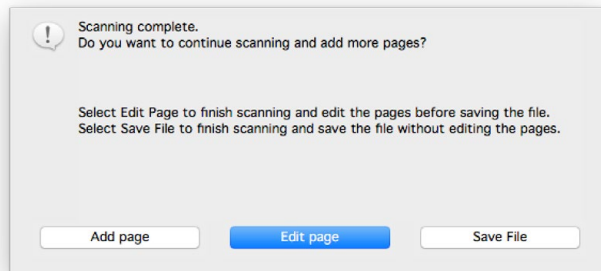
Image Format: You have a few options under this section.

JPEG: A common heavily compressed image format, good as a final output format, not suggested for images requiring retouching.

Multi-TIFF / TIFF: Common image format for graphics programs (such as Photoshop) can be compressed or uncompressed. Suggested for images to be retouched.

PDF: Creates a standard compression PDF file. Can be used to create multi-page PDF files. After scanning in PDF mode, the following dialogue should appear allowing you to select whether the next scan should be added to the same pdf or whether to save file and start a new pdf.

PICT: A Macintosh default (and specific) image file format. Not suggested as it's compatibility is limited.

Finally there are some check-boxes that can be useful if you are scanning large amounts of images.

I wouldn't suggest turning on overwrite files, it is just likely to cause problems.

You can turn off "Show this dialog box before the next scan" if you are scanning a lot of files with the same settings. However please turn it back on before you finish scanning.

You can turn "Open image folder after scanning" off if you are scanning a large amount of image, but it is generally a good idea to check each scan after it is done. This way you catch things quickly if there is a problem. Please turn this back on when done if you disable it.

Do not turn off "Show add Page Dialogue after scanning."

And that's about it, that's everything you need to know in order to scan in Home Mode.

Professional Mode:

This mode gives you access to advanced settings and in software corrections. Some comfort with image correction is needed, but it allows for more control.

The professional mode window is divided into 5 portions.

Settings:
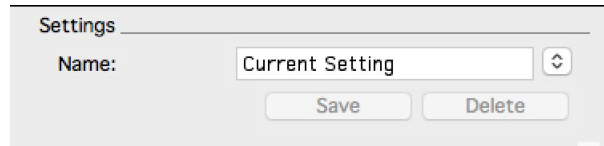
This section can be used to save or load a set of pre-created settings. For instance if you intend to scan the same document over multiple sessions, you can click the Save button once all of your settings are set and it will prompt you to enter a name for the setting pre-set you are making.

Please mark it with your name and what you are working on, so it doesn't clog up the list. (I.e. "Gates_Catalogue Scans")
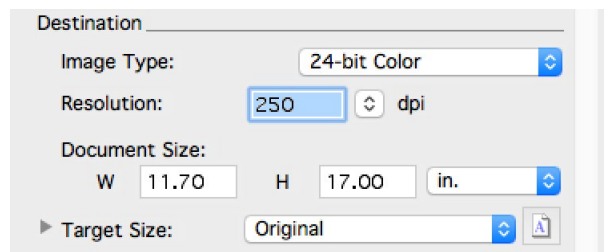
Original:
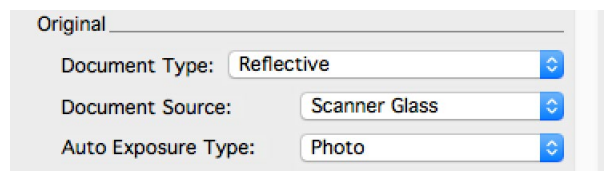
Document Type is always reflective.
Document Source is always scanner glass.
Auto Exposure Type is either Photo (which produces high dynamic range) or Document (which produces true white easier.) Selecting document also limits the adjustments available to you.

Destination:

This panel gives you control over the color, resolution and size of the document scanned (if you want to enter it manually and position the marquee in the Preview panel.)

Image Type this allows you to choose your color type for scanning.

24-bit Color: Recommended for any color scanning.
Color Smoothing: Not recommended.
8-Bit Grayscale: Recommended for any Grayscale/Black&White scanning.
Black & White: Not Recommended.

Resolution allows you to set your desired dpi, as a general reminder here are generally used dpi for different applications.

72 dpi = Average minimum dpi of a computer monitor or TV.
200 dpi = Fax quality
300 dpi = Average high quality consumer (some professional) printing dpi.
600 dpi = High quality printing dpi.
>600dpi = Used for digital enlargement of an image.

Document Size allows you to manually set the size of the document you are scanning. The marquee in the Preview Pane will resize to these exact dimensions and you can reposition it if necessary.

Target Size should be left unchanged.

Adjustments:
The adjustment settings in professional mode are far more extensive and also give you control over the severity of a correction you apply, however some of them require previous knowledge of photo correction to use. As opposed to Home mode where the severity is auto calculated.
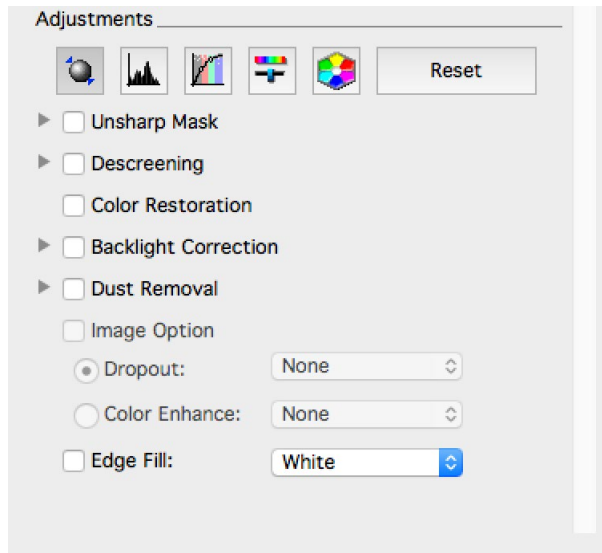
The first row (from left to right) is Auto Exposure, Histogram Adjustment, Tone Correction, Image Adjustment, Color Palette and Reset. Several of these tools accomplish the same task but offering different ways to do so.

Auto Exposure will attempt to set the exposure and color of your image automatically. Clicking Reset will undo this as well as all the other adjustments on this line.

Histogram Adjustment will give you a professional set of color and brightness controls based on manipulating the RGB channels of the scan.

Tone Correction will give you a professional set of color and brightness controls based on curve controls for brightness and individual RGB channels.

Image Adjustment gives you a professional set of color and brightness controls based on Brightness, Contrast, Saturation and Color Balance sliders.

Color Palette is a color palette.

Following this first row the other corrections are as follows:

Unsharp Mask can be used to reduce grain or moiré, instead of being automated you can select low, medium or high intensity. Most likely if you need to do this, run tests at different levels and choose the best result.

Descreening can also be used to reduce grain or moiré, but is based on characteristics of certain papers, settings reference those papers.

Color Restoration is an auto color corrector.

Backlight Correction attempts to automatically correct for photos which are backlight. It has three settings, but if you know how I would suggest to do this correction manually in Photoshop for best results.

Dust Removal attempts to remove dust and particles stuck on a print. It has three levels that you can adjust depending on the amount of dust present and the effect it may have on the rest of your photo.

Image Option is only selectable in 8-bit grayscale mode. Dropout allows you to drop one range of colors if you are scanning a color image to grayscale in order to change the look of the image and brighten that color. Color Enhance does the opposite, allowing you to intensity one color range in order to make it appear darker in the black and white scan.

From this point on, the remaining features function the same as in Home mode, so if you already read that section feel free to skip these last pages.

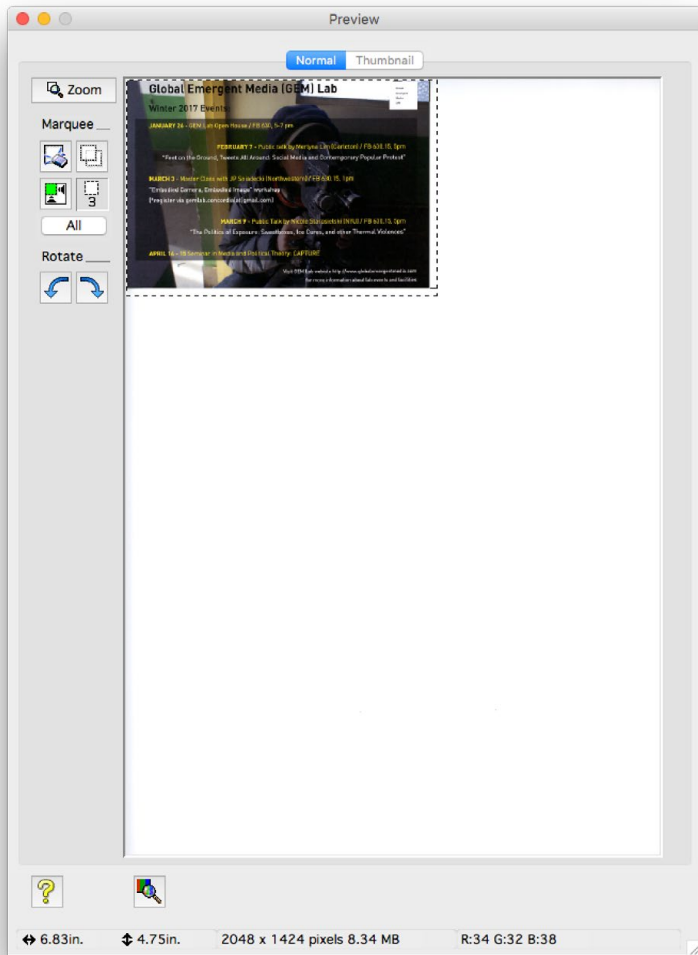### Preview / Scan / File Destination

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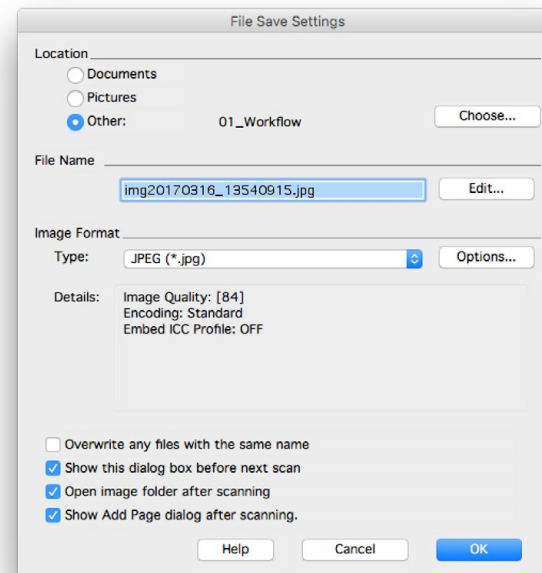
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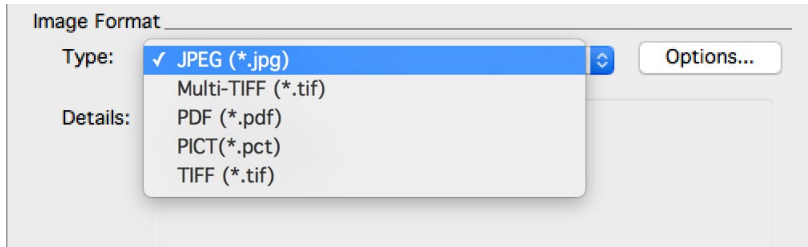The size of the output file (in MB.)

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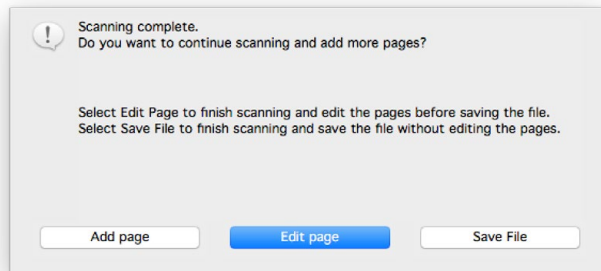
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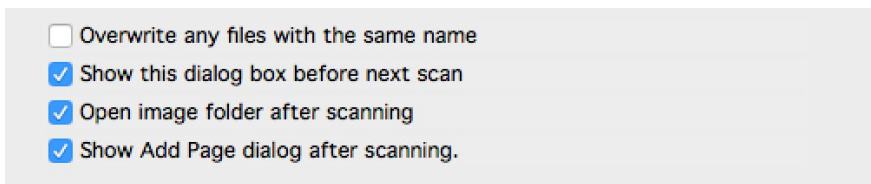
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