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the complete eejit's guide to film-making

Film & Video Lighting for low-budgets

OK so after making sure that your actor is saying the right lines, that the picture is in focus and the camera is recording probably the last thing on your mind is the way the picture is lit. But wait, the difference between something that is well lit and something that isn't can be the difference between a film that's great and one that's totally pants.

Generally you want to **keep your light level up**. Video cameras work best in a certain range - too bright and whites get blasted out (use a Neutral Density Filter to combat this effect) too dark and you get a grainy image without much colour. Well lit footage makes your film look like it was shot with a really good camera.

But you also want to create a play or light and shade on the objects before you, revealing depth, form and mood.

So how do we do light a scene?

I was working with a group making a film (I was making the tea this time around) who were shooting on film. They had some proper lights, so I had the opportunity to observe how these semi-pro's went around their work. After sitting around for 40 minutes waiting them to set up I figured out their technique. They blasted a light at the actors which gave hideous shadows so they blasted another light to get rid of the shadows, which created another shadow etc. etc. etc. All this only served to slow everything down to a painfully slow pace and tire everyone out.

My advice, **keep it simple and fast. Work with the light that is already there.**

- Put as many existing lights and lamps on in the room to increase the room's overall light level. (Techie Tip! Lights that are in the scene anyway are called 'practicals')
- Replace existing lightbulbs with more powerful lightbulbs.
- Use a reflector to bounce an existing light source onto your subject.

Reflectors

A reflector is a piece of silvery, gold or white fabric stretched over a frame. **Lastolite** make some really cool ones that explode open into massive circles. They come in two main varieties : silver/white and gold/white (the gold is good for warming up flesh tones). They are always a good investment, but if you can't afford them there's a cheaper solution around the corner.

Reflectors for nowt

Nip down to the supermarket and get hold of some really big cardboard boxes and some aluminium foil. Cut the boxes into massive sheets taking advantage of its folds, and stick the foil to the boards to create folding reflectors. Use the shiny side of the foil for a hard reflector or the dull side for a more diffuse reflector. You could also try looking

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for reflecting sun shades (y'know the ones people put in their car windows on hot sunny days).

Getting more complicated now...

On board camera lights.

Waste of time. They sit on your camera, zapping power, and have all the strength of a decrepid glowworm. They also blast straight ahead, which flattens rather than flatters your subject and create bloody big shadows over the rest of your picture. Forget 'em.

Now for the big boys (and girls). Proper big lights like the pros use. Remember our budget (or lack of budget)here so **don't buy 'em, rent 'em**.

Big Lights

To get more bang for your buck, or strictly more wattage from your wallet get a bigger light. There are a few lights that can be carried by a separate person (such as the **Reportalight**) but to seriously light a scene you need lights over 100 watts. These lights come with stands which you can adjust to the appropriate height, they also have filters and barndoors so you can adjust the quality and quantity of light they put out. The most standard pro light is a **Redhead**. Now I thought they were called Redheads cos the back of them are red (well, a deep orange really), but apparently its because the more powerful ones are called Brunettes and the most powerful are called Blondes (well, they do say that blondes have all the fun).

There's a couple of things to watch out for when you are using these. **Be very careful when adjusting the barn doors** as they tend to get quite hot (here speaks a man who saw the skin off his fingertips vaporize before his eyes). Oh, and make sure that the stands are secure and that nobody can accidentally knock them over, as a hot moving object crashing down on cast and crew is a bad idea.

If you're shooting in a small room keep the lights switched off when you're not using them as the room can get very hot very quickly. (We were making a documentary and had lit a wall with a blonde cos that was all they had left at the renting place. That room go soo hot, it was freezing outside and we were all in this room sweating buckets).

Very Big Lights

During December I came home from shopping one night, turned the corner and there was this massive blinding white light right outside my house. It was shining through the trees and kinda looked like something out of the X-Files, what with it being up in the trees. Turns out that they were shooting an advert there, dunno what for, but when I got home my shoes were covered in false snow (which according to the news is the same snow they used in GoldenEye). Wow! I trod in James Bond snow!

Three light setups

So let's assume you have blagged a set of three redheads from a local hire place. What next?

Set something up you want to light. The example that is always used is a person. Set up your first redhead (they come with little tripods which they attach to) and put it in front of the subject at a 45^0 angle looking down on them a little. This is the **key light**. Our subject is now lit. Hurrah!

for reflecting sun shades (y'know the ones people put in their car windows on hot sunny days).

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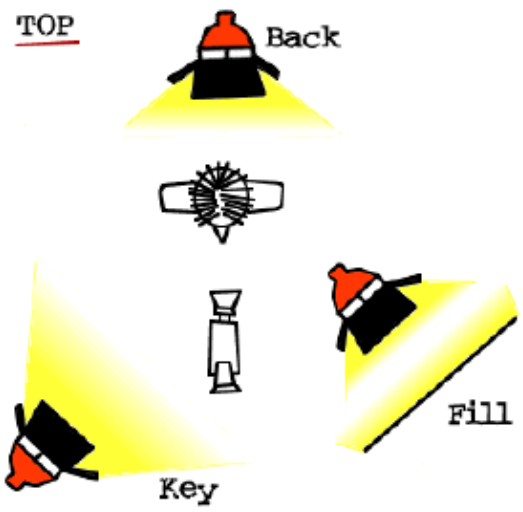
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angle looking down on them a little. This is the key light. Our subject is now lit. Hurrah!



But the subject does seem to have heavy shadows on the opposite side of their face. Erect another redhead making this one more diffuse by reflecting it off a wall, a reflector or by putting a scrim (basically a grille) in front of it. This is the **fill light** and helps soften the shadows.

You can also add a light above and behind the subject to add a slight corona (ie. white line) around them that helps to separate them from the background. This is called the **back light**.

Remember that the further you move a light away from the object you are lighting the less light falls on it - not exactly rocket scinece eh? Well think back to your Physics lessons and you might also be able to remember the inverse square law. This states that 'the intensity of light observed from a source of constant intrinsic luminosity falls of as the square of the distance from the object'.

Wow! But what does that mean? Well if I am lighting Cameron Diaz if I double the distance she is from the light (by moving the light to the other side of the room) I would decrease the brightness of the light so it was only a quarter of what it was, resulting in a very dark Miss Diaz so that nobody good see her. Not good.

Avoid Backlighting - This is where your subject is standing with the sky or a window or white wall behind them. The camera goes 'Hey, loads of white I better set my exposure to that', so when you come to look at your footage all you can see it a silhouette of your subject and you can hardly see their face. Solution - turn around, and use the light from the wall/window to light your subject (Some cameras might have a BLC - Backlight Compensation button, but these tend to on the whole suck).

All white light is not white, right?

Light not only differs in intensity, but also in its colour. Lights have different colour temperatures. Sunlight is kindof bluey, artificial light (like lightbulbs and stuff) is orangey and fluorescent strip lights are greeny.

Sunlight	**Bluey**

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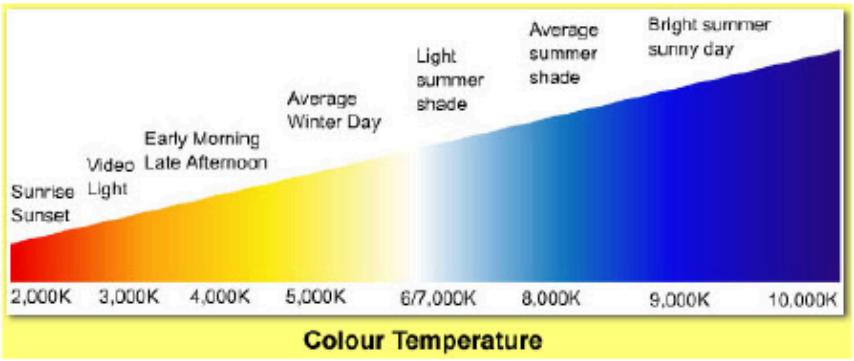
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Sunlight Bluey

Artificial Light	**Orangey**
Fluorescents	**Greeny**



Your eyes can sort this information out, but the camera tends to make everything look all one colour if its on the wrong setting. So remember to check the white balance on your camcorder.

White balance is essentially what colour your camera thinks is white. Some cameras have buttons for this i.e. indoors, outdoors etc. Other cameras sort this out automatically (although they can make a botch job of it) and some allow you to set it manually (by sticking a piece of white card in front of it and saying 'Hey, this is white you dumb camera').

If at all possible use a colour monitor (ie. play around when your camera is plugged into the telly) to see what colour different lights look on through your camera and how effective your camera's auto white balance settings are.

Try changing your camera's white balance for effect. Try using your indoor setting when filming sunsets etc.to make it even redder, and try using your outdoor setting indoors to create a blue clinical feel.

Gels

When you add light to a scene you usually end up mixing light of different colour tempertures. To make light all of the same colour you have to fit gels over the lights. Gels are plastic strips that attach via bulldog style clips to the light's barndoors. Most of the time you will simply add a blue gel to a Redhead to give it daylight balanced light.

You can double up gels or use theatrical gels to create really strong lighting schemes (see Dick Tracy). We tried this out on one film, starting off with the Redhead bare, and increasing the number of orange gels, so that by the end of the film the light is almost red, turning a normal bedroom into a vision of hell.

Light at Night

Lighting at night is no fun at all. However much light you seem to pour onto a subject it still looks dark and grainy, either that or your subject looks blasted out - white and washed out, like a rabbit caught in a car's headlights.

The best bet is to shoot all your night stuff just before light is about to go, when it looks like night but there is still some light on the horizon (you better be quick), or

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shoot it day for night.

Day for night is a cheapo 60's style technique. Check out ITV series from that period and Connery Bond films. You fit a blue filter to the front of the camera and decrease the exposure. Remember to make sure that what is in front of the camera looks right, so lights in houses need to be on and remember, no birds flying through shot!

Lighting inside cars

Have you ever really paid attention to scenes where there are two characters driving along at night talking to each other. The car's interior is lit so that both actors look like they are sitting there with 1000W lights sitting on their laps (which they probably are). Compare this to real life - light in car? nil.

We shot a scene like this using a portable light aimed downwards bounced off a reflector that was sitting in the back seat. Unortunately this car was a mini so there wasn't much room and we had rented the world's largest reflector which proceeded to unfold itself halfway through the shot appearing in the back seat like a surprised passenger! Take two.

Burn Baby Burn - creating fire light.

Need to create a decent fire effect on the faces of two characters as they watch a building burn? Aim a redhead with an orange gel away from the actors towards a massive reflector. Shake the reflector, aiming the light onto the actors. Add burning sound effects and voila 'instant fire'.

TVee nights - creating TV and monitor light.

A similar method can be employed to light a room of people watching television at night. Blast a blue light over at your actors and wave a piece of paper in front of it very fast to create a flickering effect.

Visible Light Beams

If you want to be a real show off and start painting with light you might want to consider using a smoke machine. By diffusing the smoke so that a thin haze fills the room you can shine light through it so that the beam reflects off the smoke particles and can be seen. Watch any episode of *My So Called Life* or *Party of Five* for a brief example. Smoke machines use a liquid which it heats up producing clouds on non-toxic smoke - you can usually rent one for ten or twenty quid a day.

'Turn off the light on your way out'

Good lighting adds so much to your film. It's like having another actor. Use light to create a mood, to tell us more about the characters and the world they live in.

The greatest thing about making movies is that it is pure madness. All you are doing is trying to capture rays of light onto a thin piece of celluloid or videotape. **Moviemaking is simply painting with light.**

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Film Lighting - Talks with Hollywood's Cinematographers and Gaffers is an excellent read that has a variety of industry names discussing lighting techniques. Its at its best when discussing real-world examples of lighting eg. location interiors, night shoots etc. allowing the contributors to suggest way that they have solved lighting problems in the past.

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If you've read anything by Focal Press before you've probably got a good idea of what to expect. **Lighting for Television and Film** is a good solid textbook which covers everything in exhaustive depth from the physics of light, through lighting styles to equipment and safety. Packed with diagrams, photos and err..graphs and tables!! If you really want to know your lighting stuff then this is your book.

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The first book written about film lighting, **Painting with Light** is a classic text which can still teach us a lot today especially if you are working in black and white (an artform of its own) or if you're trying to recreate film noir style lighting. OK, so it has dated a bit, and in parts become unintentionally funny - but it was written half a century ago (in a world where filming 'ladies', 'steamboats' and 'criminal faces' are vital for a film). If its recommended by **Martin Scorcese** its good enough for me!

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