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CINEMATOGRAPHY

ART

a quarterly Magazine

Binod Pradhan

Barun Mukerjee:

Amit Roy

Ken Metzker

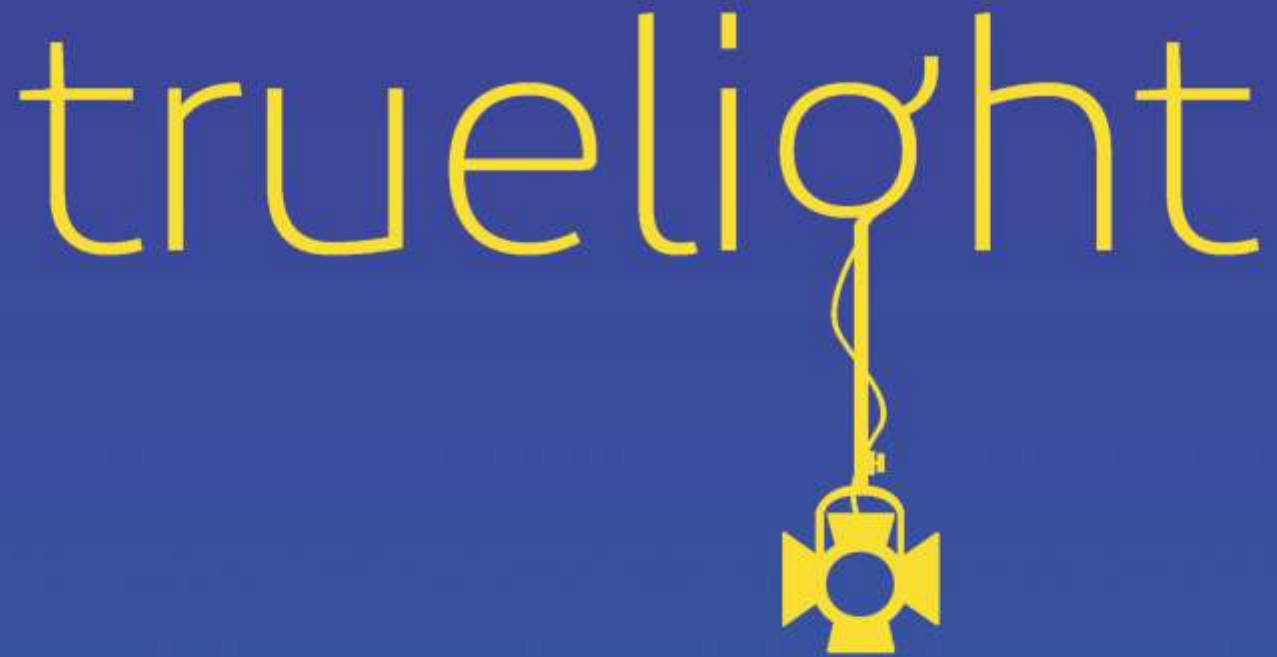
PANASONIC: AG-HPX250
TASCAM DR-60DR. for DSLR camera

CANON: CINEMA EOS-C-500

SONY: PMW-500
AJA. Ki Pro Quad



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DELHI

+91 9810444349



MUMBAI

+91 9320223624



AHMEDABAD

+91 9978370326



ODISHA

+91 9699281539

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Editor & Publisher:

Naresh Sharma

Chief advisor:

Dr M. B. Sharma

Technical Advisor:

Abid Asif

Advertising Team:

Robin Banerjee

Upasna Jain

Malvika Sagar

Priyanka Jain

Graphic Designer:

Ram Pratap

Photographer:

Arun Dhiya

Head Office:

CRAFT: Center for Research in art of film and Television.

272, Car Market, Sector - 7, Rohini,
Delhi-110085

Tel.: +91 11 3241 6868 / 3291 6868.

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Editor's Desk

In India a number of magazines are already being published on the technical aspects related to audio-visual transmission. Therefore, one may question the need and relevance of any other magazine dealing with the technicalities of cinematography.

The answer is that cinematography in India has come a long way since 2008 when the Indian government recognized cinematography as an art form and conferred the coveted Dadasaheb Phalke Award for the first time upon a technician, Mr. V.K. Murthy -- a legend in the world of cinematography.

Nowadays from the image capturing to image projection, things have gone digital. As such, new technology has on the one hand made the work quite easy and comfortable but on the other has also made the things more complicated. Today there exists no such magazine which covers exclusively these aspects of "Indian Cinematography". The purpose of this magazine is not only to document the "Subtleties and Nuances" of the lighting techniques of various cinematographers working in the industry, but also to apprise the younger technicians of the latest tools and techniques being used in today's world of cinematography.

The issue contains the interviews of well known names of Indian cinematographers representing the expertise and experiences of generations. This seed named "Cinematography Art" which is in your hands in the form of a magazine looks forward to reaching a stage when it is sure to bear flowers, fragrance and fruit.

We look forward to your suggestions and support for its sprawling growth.

Cheers!!

Naresh Sharma

naresh.sharma@log2craft.org



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CANON EOS C-500



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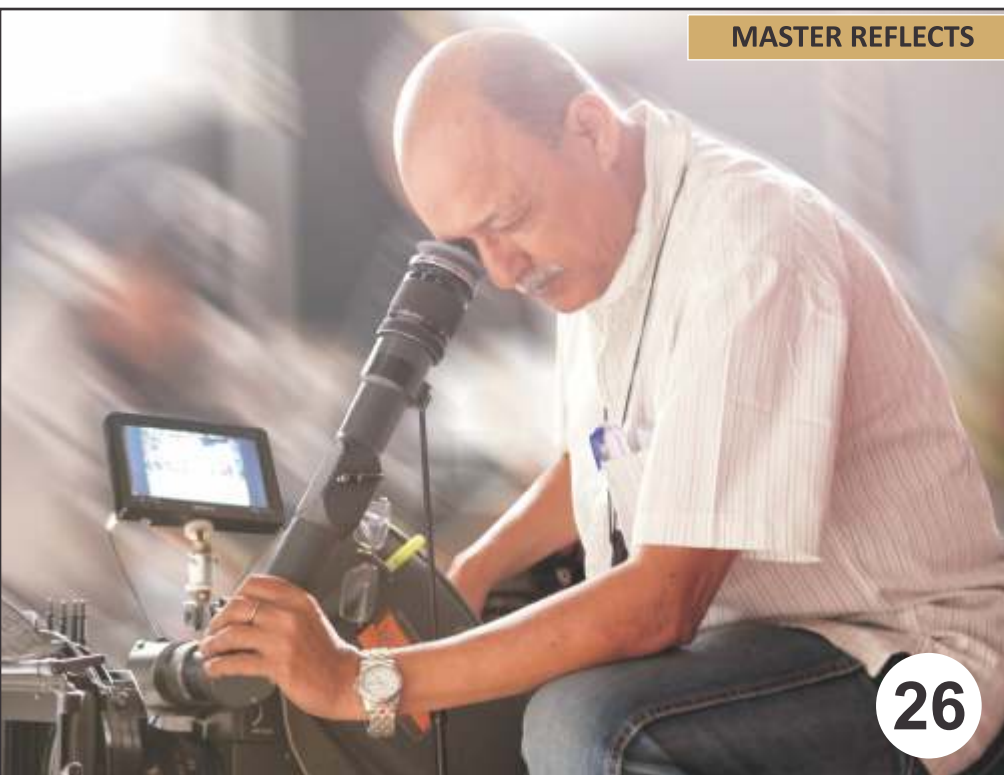


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Binod Pradhan

Veteran Cinematographer

Recollects his Journey



Binod Pradhan

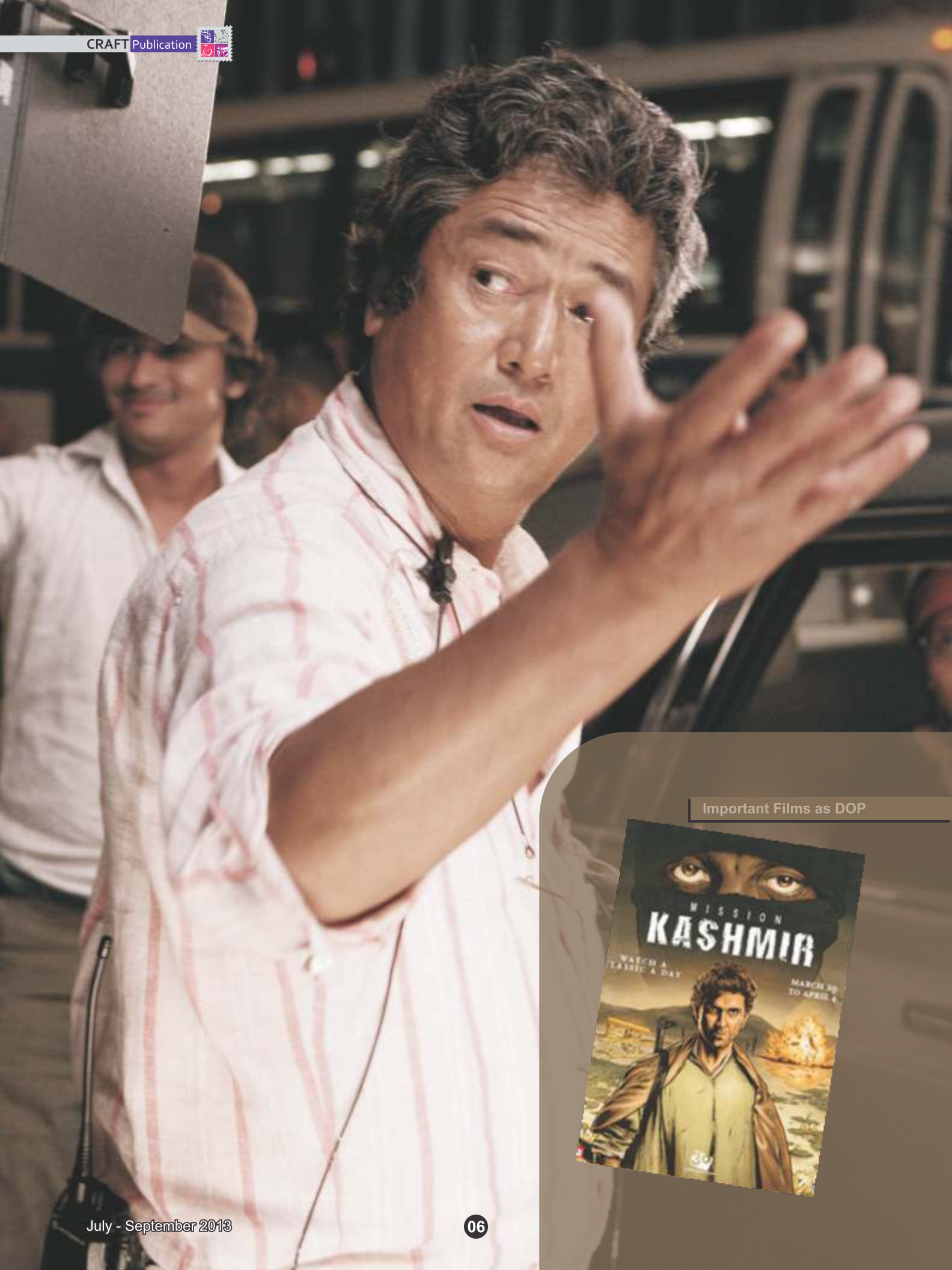


How did you start your journey as a cinematographer and how much helpful was the education at FTII ?

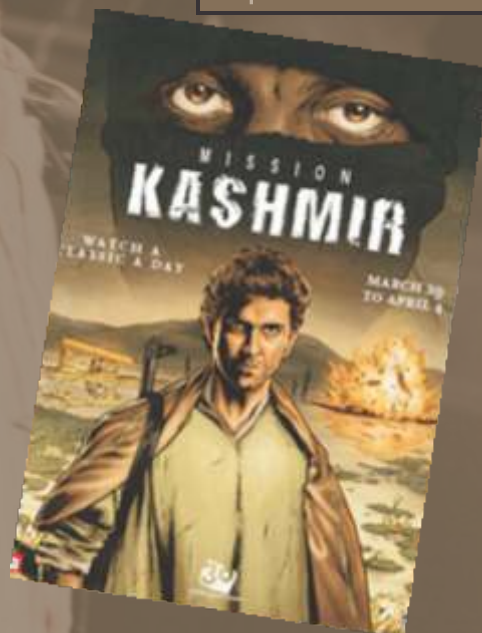
FTII, pune is one of the best institutes in India wherein we are exposed to lots of cinema techniques and styles. There we watched and studied a huge variety of films, observed things and learnt a lot. The teachers were good and the facilities were nice. I came from a very small town named Kalimpong. I was a sort of withdrawn character. I hesitated going to someone and ask for work. I and my friend Shambu Pradhan passed out from that institute in the same session though he was a graduate in editing. Since I didn't know people in Bombay, so we thought of trying to find some job in Nepal. We knew that in Nepal there was a Royal Film Corporation. So we went there, but the director of the corporation told us that there was no job for us. We came back to Bombay and it was then that Prem Sagar -- another DOP from the institute -- asked me to work under him. That's how my Bombay journey started. At that time the DOP'S from the film institute were not favorable with the people. Most of the people used to think that these people having learnt for three years at the institute tended to be smarter. I mean that this was a general tendency when we went to somebody for work as an assistant.

Nevertheless, as an assistant I worked with Prem Sagar, A. K. Bir and Barun Mukerjee. There I learnt practical aspects of this field -- how to place lights, how to talk to light-man, how to match lighting,

The man known for changing cinematography into visual artistic poetry. He endeavor to deliver the best and the unique, movies that brings a splendid aesthetics to the viewers. He is known to use his camera like a paintbrush to create visuals of unmatched color and combination. His cutting-edge imagery in the much-applauded "Rang De Basanti" for which he won the IIFA Awards and Film Fare awards for Best Cinematography. He's worked with the biggest stars, raising the bar each time. He has also photographed some of the most beautiful women on the Indian screen like Madhuri Dixit in "Parinda", Manisha Koirala in "1942...A Love Story", Aishwarya Rai in "Devdas" making them studded with glitz and glamour. Friends like Vidhu Vinod Chopra repeated him in "Khamosh", "Parinda", "1942...A Love Story", "Mission Kashmir" because of his exceptional talent and complete absence of attitude. He is a veteran cinematographer known for his movies like "Delhi 6", "Munna Bhai MBBS", "Tara Ra Rum Pum", "Yamla Pagla Dewaana", "Mausam", "Kismat Konnection", "Bhaag Milkha Bhaag" etc taking the art of cinematography to a completely different league. In this interview he walks you through his memorable journey.



Important Films as DOP



etc. Meanwhile I started doing some independent jobs with companies like Durga Khote Production and there I did many documentaries. Ultimately I decided not to assist any more. Just then there started a youth co-operative organization and I became a part of that team. We shot a film 'Ghasiram Kotwal' -- an experimental film. After that I shot a Marathi film 'Jait Re Jait' which was directed by Jabbar Patel.

Tell us something about your association with Kundan Shah ; how it started?

It started with 'Jaane Bhi Do Yaaro', a comedy film. Though not a big hit, it was one of the difficult films that I shot . It involved a lot of hard work and that too for long hours. It was an NFDC produced low-budget film involving quite a large number of people and various location-shoots. I had just started shooting movies. So I couldn't say I needed this or that, whatever. I didn't ask for too many lights like the way I might do now. This was a different shoot because maybe the comedy with Kundan Shah was not very easy. He is a very serious man. In one of the scenes, I was holding the camera and I was giggling while the shot was going on. I was trying to control my laughter while taking the shot but that reflected that I was not a very experienced DOP at that

After all, its very title was '1942- A Love Story'. So I tried to make the things look as beautiful as possible. Around that time this "promist" filter had come and I had never tried that earlier. Somehow I decided to use that and it worked . Manisha Koirala once said that she never looked as beautiful as she did in his film.

“



”

time . I had to think hard about many things -- how to light up the things, how to get the correct lighting ratio , how to control the wall when there was no set . It was all a very complicated problem for me then though now I can do all these things blindfolded.

You have been associated with Vinod Chopra for long. Please tell us something about your work with him.

Vinod first took me along in one of the shoots and he was very happy with my work. Since then we have been working together. 'Parinda' was the first star-studded film that I had shot but we wanted to give it a different feel. So 'Parinda' was though a commercial film, still it was treated so differently that it didn't look like a commercial film.

The first thing that I said to myself was not to deal with it the way the normal Hindi commercial movies are shot. So I made every artist lighting up from front and make it as flat as possible. I mean that most of the time I did like that. I like bounce-lighting, and I think most of the people at that time didn't like or approve of that in commercial films. So I used soft light, not necessarily always lighting actors from the front, but looking at from where the

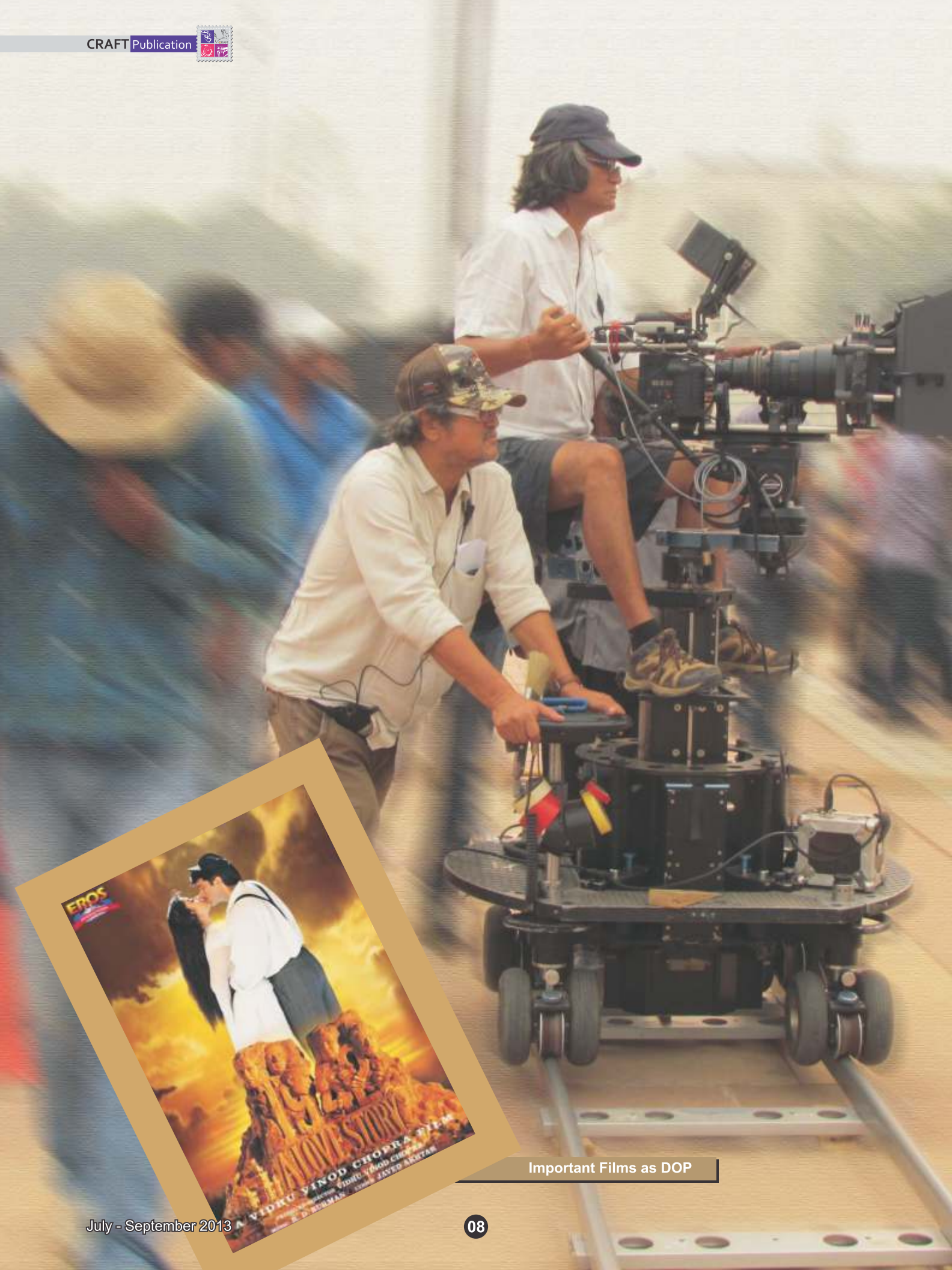
light may be coming from, say a window or a door. The effort was to seek the feel of source of light and keep shadows at time. That is the way I worked in 'Parinda'.

When you try to do the source-lighting, it is generally believed that most actors are against it since it goes dark sometimes and the stars object to that kind of lighting. How did you negotiate with that ?

No. You don't need to make it so dark . It doesn't happen like that. When the characters are backlit t , there are a lot of angles from where light is falling on the face unless dramatically you required darkness. I cannot think of jet black faces, there should always be a little bit of details here and there .

Moving to another big project '1942' and the kind of big hype that was created around it, wasn't there a lot of expectation to live up to ? So how did you prepare yourself for that particular film ?

See, you do not treat a film differently only because you think that it is a large scale film. I treat a film the way it is supposed to be treated. This film needed a little bit of largeness because of



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its big canvas. An exotic location was there, a huge crowd was there, large sets were there. But for me the prime job in this film was to try to make it look more and more beautiful because basically it was a film on romance, on love. After all, its very title was '1942- A Love Story'. So I tried to make the things look as beautiful as possible. Around that time this "promist" filter had come and I had never tried that earlier. Somehow I decided to use that and it worked.

Manisha Koirala once said that she never looked as beautiful as she did in his film. We did a lot of reiki and discussion on the sets what the things should be like. I didn't want to give that typical period-look. I do not believe in that. Even in 'Devdas', I

tried to do something which was good for the film. As per the script, this one--I mean '1942'-- needed beauty. So I tried to make it as beautiful as I could. There was no otherwise handling the film for me. If it was a period-film, then it might be because of dresses and costumes of the actors or the sets. I could have given it 'semi sepia', but I did not. Also in the studio, we had painted backdrop so the sky has to look real, the mountain has to look real. sometimes it become very difficult because somehow it always looks little artificial so I thought maybe burn out the sky little, so that it is just doesn't look like a painted background. So my assistance were all there, lighting the sky and cutting the mountain so that the sky look little brighter. For the night scenes, I just gave a little blue in the sky and make the mountains little black so it has some depth.

Tell us about the famous four/ five camera set-up where some well-known cinematographers were called upon as the 2nd unit to shoot the crowd.

A: That was in the climax sequence of '1942' and it was needed because there was a huge crowd -- I think around 1200 people. Now that was too big a crowd to shoot without any mirror effort for crowd multiplication. Moreover, there was a great deal of movement also involving different groups of crowd going from one point to the other and that too at different places. Now just with me and my one camera it might have taken a lot of time and a lot of money. So we thought that we should have at least four or five cameras. Ultimately five cameras and five very experienced cameramen to operate them were called. Ashok Mehta, Govind Nihalani were brought in. it was a marching sequence since when groups came from one place to the other at almost the same time, we always ensured that the cameras were there at various places. We did the shots with five cameras couple of times. Some of us would be shooting running shots while some others would be shooting something else.

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*Honestly speaking, I really like it when a director demands something special. It makes me work a little more. Sometimes they don't demand but expect a lot from you. I like **Ram Madhwani**. He really works a lot on his visions about various ad films. He experiments about various things. He is one guy who really takes pain but, then, it is worth.*

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Important Films as DOP

With Sanjay Leela Bhansali you worked in 'Devdas' which again is a period-film. However, when you really look at it, it looks to be a modern contemporary film. Please give your comments.

Here also I thought I should not give this film the usual period look. In fact, I don't believe in this period look unless I feel that film really demands that. Right now I am doing the film titled 'Bhaag Milkha Bhaag'. Here I have given the movie a different sort of look making it a little older and all. Generally with a normal film I would not like to do it because it has to have a lot of glamour and a polished look.

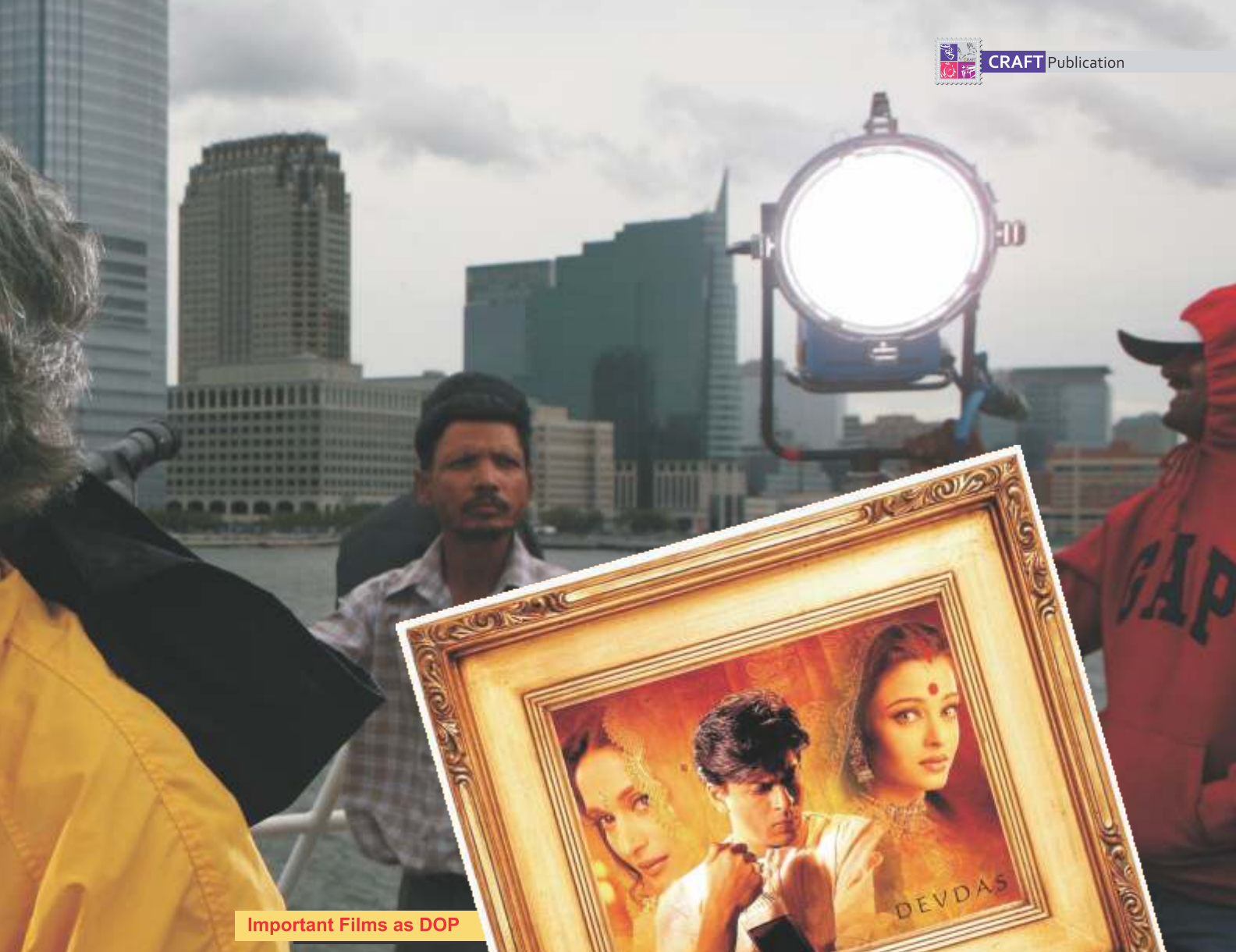
Coming to 'Devdas' again, I didn't want it to look old. Rather I wanted it to look very beautiful as it had colorful sets. So I decided to enhance the beauty of those huge sets by doing whatever I could do.

The film city was very large. So I and my assistant took round of the whole sets along the lake and all. First I didn't know what to do. Then I asked my assistant to put 100 watt bulbs in a particular tower. So that's the way we started lighting up the huge set with 100 watt bulbs though we had 5K and HMI and what not. There was some problem like how to light up a 'strain glass'. Now 'strain glass' always needs something behind it to be seen otherwise it gives a bad look. Another problem was how to light-up 'diyas' which were on the other bank. They were not 'diyas', they were actually lamps flickering like 'diyas'. So these were the problems which

interestingly got solved. Also there are sequences in which you have to do the computer graphics. Aishwariya with a 'diya' in her hand is dancing; when she moves her hand this way or that way and 'diya' is full of oil, it is risky. So we used computer graphics for such sequences. We used a small bulb, sort of LED. And there was some sort of reference which the guy handling the computer graphics was to use. He took that element and put a frame around it. We also tried effects in camera in the song "morey piya" where in the background the trees on the sea are sparkling and it all went very well.

You have worked with Rakesh Om Prakash Mehra in commercials and feature films. What is the difference in his style of working?

Doing a commercial with Rakesh Mehra was one thing but doing a



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feature film with him was a completely different experience. He wanted to have every sort of dramatic impact, not necessarily exactly the Bollywood way. Quite curiously he would like to make it look very natural and then he would also like to get drama. Now this made me try so many things. First I would let everything look dramatic and then to put things in a more naturalistic way I might not make it very glamorous.

In 'Rang de Basanti' we tried the period-technique because I thought that was needed for the film. So I tried to make everything look more black-and-whitish as if it were a black and white picture faded into a yellow color or like any black and white photograph that with time turns faded and yellowish. That was the basis for my choosing a yellowish color in the past sequences--the flashbacks in 'Rang de Basanti'.

I had done some photo painting in my studio in Kalimpong and there I used to paint photographs of customers by adding skin tone color in the face, and other colors in the background--an old black and white technique of transparent water color. So I thought: let's try and give the feel of that very phase. It was painted like that in 'Rang de Basanti' and it is why we were successful all the time to generate that peculiar color which is flattish--not a skin color but a flesh tint. I tried to get that flesh tint coloration. So that was my

basis of getting the past look and the present, of course, was like present without any manipulation of image.

In the past images, we would go closer to people and had more separate close-ups, but in the present we decided to have more of group shots--nobody was to be alone in the street. So it was what we tried in 'Range de Basanti'. We also did few experiments by changing the FPS. Some shots were as slow as 6 FPS and some only 4 FPS and stretched it to have a streak like feeling that you can find in many of the shots of the past.



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What I still remember is that "day for night" scene wherein we had guys from VFX and CG and they added city lights, sky light, blue light and moon glow on the sky. We added headlights of the cars. It's not 100% thing but it is pretty good. We can't shoot in a night like that and then we could not have an artificial light falling on them as to me it would look worse than a "day for night".

"Day for Night" situation was something where I created lights through CG--city lights / moonlit sky and sky-glows. A lot of work. Just to see how lighting could be replicated later on in graphics, I had taken a group of graphic guys to the film city with me in the car, and telling them how dust gets affected by headlights, how the dust is affected by rear headlights or the back-light of the car and so on, so forth. For them also it was a little bit of experiment and as I recall I think it the best job they have

done so far. However, one or two shots were pretty impressively done in comparison to other shots. When the cars are running, there was a shot wherein the tube-lights look stretched. Many people later asked me how I did that. Well, it was a simple thing of shooting at 4 fps to 6 fps!!

To talk about the current film 'Bhaag Milkha Bhaag' which you are doing with Om Prakash Mehra, was there any situation wherein you had to work in terms of some special type of photography ?

Yeah. There were a lot of stadium-scenes where we had to create the stadium because we could not go to various stadiums involved and shoot all those places. Even if we had gone, we could not have got the desired results as at present those stadiums look very modern and we wanted to show the times of 50's and 60's. So we shot in



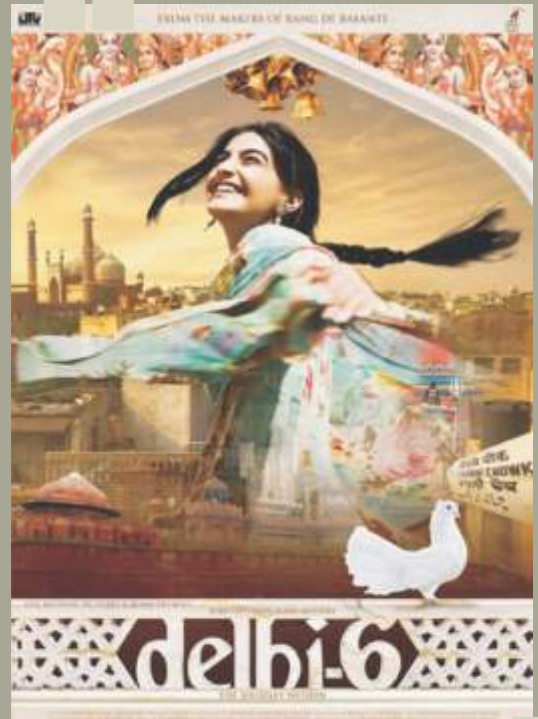
Important Films as DOP

Jawaharlal Nehru Stadium and in some other stadiums. we shot there with four cameras as there were different types of chases. This film also has its past and present. Thus it has "Milkha" in childhood. I shot that with a very normal hue and I am still working on it. I have done another film 'Delhi 6' wherein the light was quite natural, and in terms of DI, a low contrast and less saturated look was achieved.

In 'Bhaag Milkha Bhaag' the races were quite exciting because there were quite a few races of 400 meters and so many other kind of races. We tried to improvise and give each race a little different treatment in terms of shot-taking or 'Lensing' to get different flavors for the running.

You have worked with many ad film-makers, and advertising is a different ball game. So can you recollect some ads in which it was some trick to be employed or they really wanted something special? I mean something which makes advertising more challenging in terms of shooting?

Yes, it's different. Advertising concentrate on products and give them generally a certain glossy look and that is the way it happens most of the times. Feature films on the other hand are more dramatic and you can take more liberties with them in terms of look. Here in ads it is little different. I remember "Iodex" film directed by Ram Madhwani because it was a table top where the train was running inside a character. It was one of the few miniature



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film-sets that I have shot . In advertising you learn much more while doing things for various effects. Most of the things I applied in feature films, all have their base in advertising. All originated from advertising as far as I am concerned . It was all very stylized--if you would like to call it that way.

Today many cinematographers do not bother about the key, fill, back, kicker kind of things. So do you remember any music video / ad film where you tried something very stylized in a way which does not belong to old school of thought in terms of lighting ?

Earlier, you had to do lighting in certain ways. Nowadays people are happy having the shadow and stark faces. They are not natural but they are stylized. During the song picturisation of a feature film, I had lit up a girl which is burning out. You can call it stylized or you may call it spot-lit.

I don't keep the dark faces unless there is a vision for it. In 'Jaane Bhi Do Yaaro' there was a scene in that characters could not see one another. But as a cameraman I had to show something. So I lit the faces very dimly to show them in a thinly shadowy way since that scene demanded that .

You have worked so much with so many directors that you are sure to know too much about lighting and composition. Then one day you come across a director who begins to specifically want this or that way making you wonder and ask yourself what you are doing here. Did you ever encounter this kind of a director ?

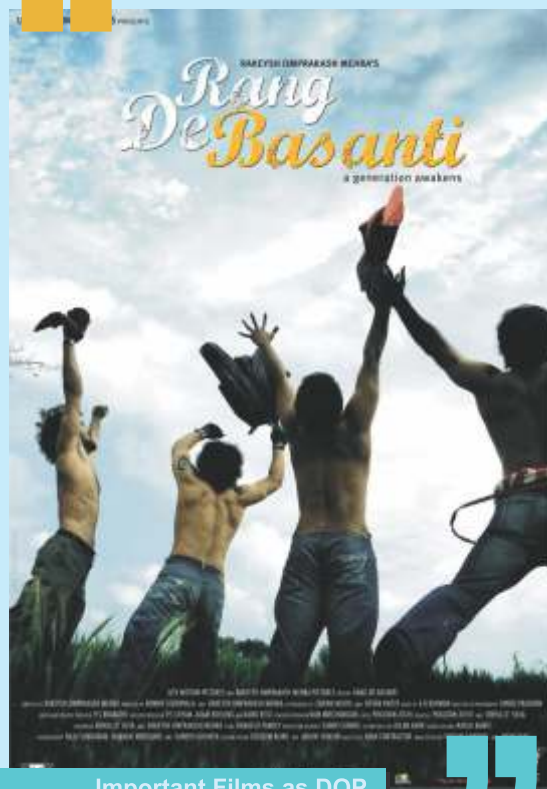
Honestly speaking, I really like it when a director demands something special. It makes me work a little more. Sometimes they don't demand but expect a lot from you. I like Ram Madhwani. He really works a lot on his visions about various ad films. He experiments about various things. He is one guy who really takes pain but, then, it is worth.

You have grown with the celluloid and now everything is digital. So how do you find the shift?

With DI you can do now lots of things which were not possible earlier. Previously what you could do was the basic correction--change the color, brightness, contrast and that's that. Now you can change the specific color in selected areas; you can change the tonal sky; you can brighten up a face; you can darken up a face and you can have the different tones, all together and much more than what you could do on celluloid. So there are lots of possibilities in DI. That does not mean that you should not work hard at the time of shooting because you cannot get everything in DI. The base-material must be good and only then you can work further.

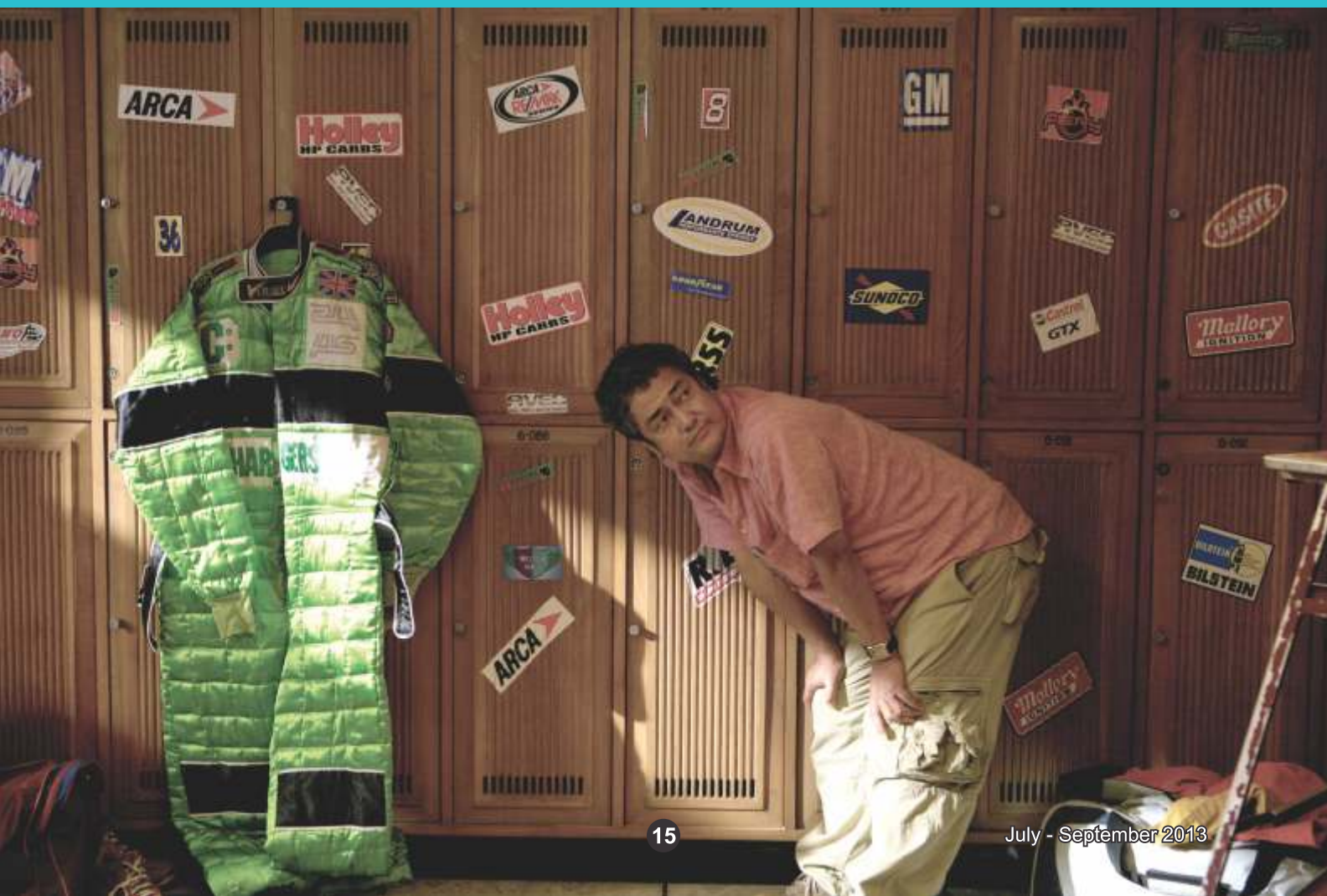
There is lot you can do in DI--change the contrast to certain extent, increase the highlight, etc. So the pallet of the DOP has now increased a lot more. I think that is the best part of shooting digital. Now I myself find going a little more extreme. There are much more liberties you can take all because of DI.

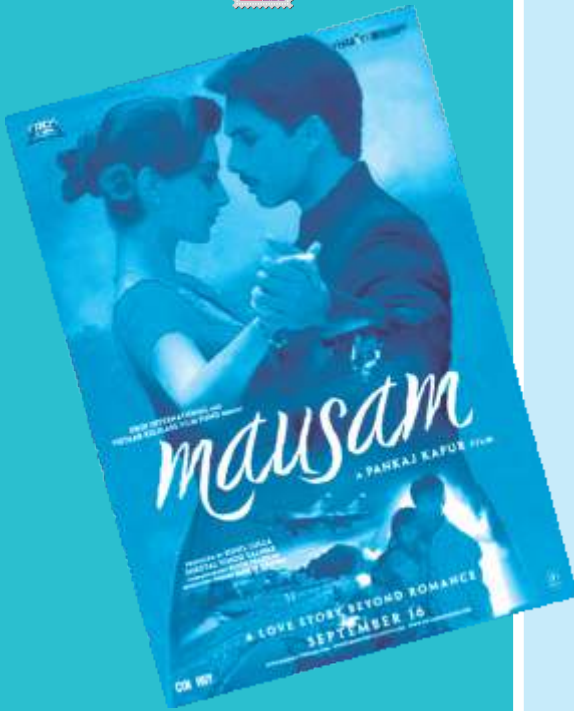
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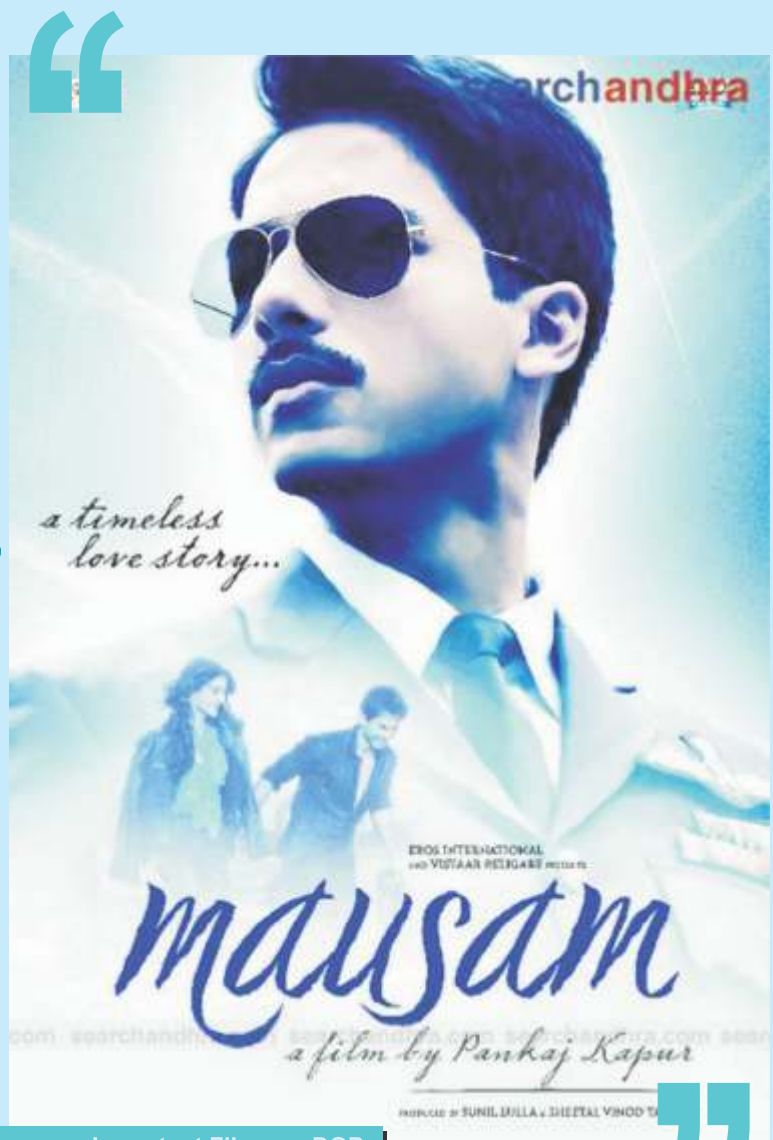
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Coming to the Digital intermediate process, what kind of a colorist you like to work with, someone who knows more about the console or someone who has more of aesthetic sense?

A colorist needs to have both, because if you have someone who knows a machine very well but has no eye, then it gets very difficult because you have to tell him everything, little bit this and little bit that and only then you may get what you want. And somehow I feel if I want something, I really want that very thing. Digital is going to stay here. Since 'Mausam' I have started shooting digital. At that time the digital cameras had just come and I did some tests and I was very happy with the outcome. So in the middle of that very film we stopped shooting on celluloid and shifted to digital.



Important Films as DOP



In 'Rang de Basanti' we tried the period-technique because I thought that was needed for the film. So I tried to make everything look more black-and-whitish as if it were a black and white picture faded into a yellow color or like any black and white photograph that with time turns faded and yellowish. That was the basis for my choosing a yellowish color in the past sequences--the flashbacks.





PRODUCT REVIEW

stereo microphone) as well as two rear XLR inputs with mic, mic+48V and line options. Sony wisely included level controls for both front and rear inputs and the ability to map and monitor channels 1/2 as well as 3/4.

Power consumption is a stingy 29 watts (33 watts with view finder + microphone). You indeed get three hours of shooting from a 90-watt Info Lithium battery.

As noted, the PMW-500 records to two SxS slots. The camera sports a full range of outputs, but most notably only one SDI output.

The standard viewfinder is an extremely sharp monochrome viewfinder, as expected in professional cameras, with adjustable peaking for focus assist. Zebras are activated on the viewfinder, and their respective limits may be configured in the menu structure. Again as one would expect, the switches for white/black balance and shutter are on the front, white balance A/B/Prst and gain on the side. Options can be set in menu structure for gain and preset white balance or auto tracing white balance (ATW), while a side knob allows color temp adjustments. Finally, a 3.5" color LCD — the same screen as on the EX-1R — tucks neatly into the side of the camera or can be adjusted for viewing by operator or talent. The combination of the histogram display and configurable zebras represent highly useful tools in setting exposure.

Who is using it in india? Who is the target market for this camera? Anyone involved in high-end ENG or field production. For example, the in delhi and bombay there are more than 20 rental houses which offer this camera for rent.

In other words, this camera is designed for the quality requirements and rigors of broadcast production and as such combines the broadcast-useful and easy-to-edit XDCAM HD codec with a highly maneuverable and comfortable body. It's an operator's dream and, when compared with the higher-priced production cameras in the Sony line, represents a tremendous value.

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In Review: Sony PMW-500

CAMCORDER DEFIES TRENDS WHILE SERVING ESTABLISHED USERS.

Sony PMW-500 .you might ask, would any manufacturer introduce a large 2/3" CCD camera when DSLRs and large-chip video cameras are today's trendy rage? This question has led to some significant confusion on the part of a number of potential users, and a review of the PMW-500 is a good place to start sorting out the issue.

I've reached the point of wanting to speak with greater specificity about cameras, making a distinction between video cameras and digital cinema cameras. If you read product literature carefully, you'll notice this distinction.

For the moment, 2/3" video cameras remain the standard of video production. That's not to say that smaller-chip cameras have no room in the process, but 2/3" is still the gold standard. But why CCDs? There still remain any number of content creators who remain concerned over the potential jello-vision and flash banding that CMOS-based cameras potentially can create. While CMOS chips often have superior low-light performance, Sony has utilized its Power HAD FX CCD chips to create the optimal image that the CCD can deliver.

The PMW-500 represents the apex of the SxS-format cameras that Sony has delivered thus far, a family that now includes the EX-1R, EX-3, EX-320 and EX-350. The EX-350 broke new ground by utilizing 2/3" CMOS chips, and now the EX-500 crosses yet another barrier by adding

XDCAM HD422 50Mb/s, previously available only in the optical drive-based PDW-800.

While the PMW-500 borrows features and functionality from the PDW-800, it fits more into the XDCAM EX family of devices.

Even more amazing than the weight is the fact that this is a solidly built professional camera — with none of the "plastic" feel that is present even in the PMW-350. The PMW-500 just feels like something you can take into the field and subject to heavy use.

The PMW-500 shoots DVCAM and IMX 50Mb/s in its SD modes, and in HD shoots both XDCAM EX HQ 35Mb/s 4:2:0 and XDCAM HD422 50Mb/s. All frame rates and regions are available — NTSC and PAL DVCAM, 1080/720 HD in 59.94 (interlaced only at 1080), 50 (again interlaced only in 1080), 29.97, 25 and 24 fps. HD recording writes to two SxS cards in UDF mode, writing the MXF structure. In other modes, there is a choice of UDF or Fat32 formatting, the latter writing in the MP4 format that EX users know.

Another feature borrowed from the EX line is under/overcranking, which Sony calls "Slow & Quick" motion. Access is as simple as selecting S&Q motion in the menu structure and using the knob on the front left of the camera to scroll through and select options. In fact, the entire menu structure felt very much like the EX series.

As a full professional camera, it has a front mic input (I tested with the optional

KEN METZKER



Imp films of ken as DI artist

An ingenious artist known for his expertise to wrap the video with a glossy package and pepper it with bright glittering colors on screen. The man who demystify color aesthetics in cinema into real by giving word to silent “Barfi!”, teaching lessons of life in “Zindagi Na Milegi Dobara”, gave picture perfect passions and unforeseen tragedy in “Rockstar”. He created chills in the Indian Cinema by primarily tapping into the dark side of the mind and grimy underbelly of Mumbai that you can barely take your eye off the screen in “Talaash” and also making awe-inspiring history from boring to enjoyable with his admirable sense of colors and glorifying the past in “Rang De Basanti”. He revived the concept of exploring the battle between the genders in “Hum-Tum”, showcasing romantic saga that yanks off his cool shades in “Jab Tak hai Jaan”, badgered the action in “Commando” and much more. In this interview he reveals the secret of color correction and his creative talent of high-level technology application.





INTERVIEW-Colorist



How do you finalize the look of a film via DI? Do you listen to the script or the brief of the director or the DOP or do you consult some visual reference?

Though generally it is the colorist who enhances the look, but in reality the look gets started much time before. When the script is done, the DOP, the production designer and the art designer comes on board, the dress designer has already decided the costumes etc., it is then at that time things come to me. Now the basic look is in its place and one can fool around a bit with the help of contrast and color-saturation, maybe by enhancing certain colors or 'de-saturating' others. Usually it is the DOP who shows me the stuff he has shot on the set and gives me a few references. Some people also bring the black book, movie references they think are very similar to that and that is, indeed, a process. However, in each movie it's a different process, it's never the same. Generally it is the references, and sometimes it is just sitting with and talking to the DOP in order to understand the story. We also watch the movie offline, and it gives us a fairly good amount of idea about the movie.

Do people come to you before they start the shoot of the film or they conduct certain kind of test before starting the film ?

In the past people did not use to come before they started shooting, but



nowadays as people get the hang of the DI and understand what it can or cannot do, things are becoming different. Now generally, the make-up tests are shot before the actual shooting starts. Sometimes they just test the camera because a number of times the camera itself is a new item for the DOP. Generally speaking, if we shoot some stuff that is similar to a movie, the DOP and the colorist start working on the visual



Imp films of ken as DI artist

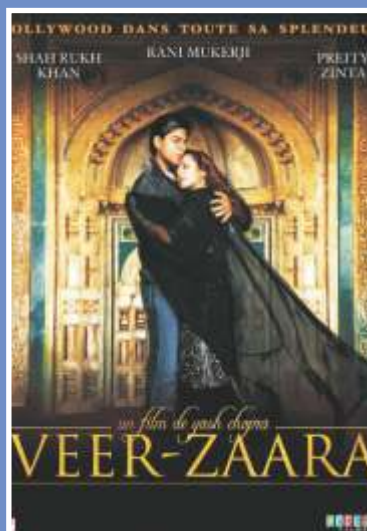


communication before hand, which then later becomes very vital. So the visual communication is very important to get started in the beginning and most of the DOP's that I know have started following this pattern. They will do one short test and spend an hour or two, so as to make sure that everything is working as planned.

Which are the Indian films where the maximum DI potential has been exploited by you?

It's a tough question because each film has its own scope. For example, in 'STUDENT OF THE YEAR', there was nothing spectacular in terms of the look. It's not looking unnatural by any means, of course, but then DI is used for glamorizing the film, the actor and everything, and here it was doing just little clean-ups that would help the overall glamour of the film.

I think the first movie that comes to my mind was 'Khakee' wherein I really made an much effective use of DI. There was one song and they had to shoot it in two days. It is what they originally planned and they had to shoot it outside. I think it was in the film city and there was nothing new about it. It was a nice song and everything else also was nice but there was nothing unusual about



Imp films of ken as DI artist



INTERVIEW-Colorist

it, nothing new. We decided to make it look like a cross process film and that always makes something look extremely strange. So we looked to that kind of stuff and it was done that way. As is done in still photography, we started playing around and we came up with our own different looks.

For me that was indeed a big moment because when you are able to make something look completely different from what it is! You know what you expect and the real thrill is that it worked in the song and it worked for the story as well.

It shocked a few people initially, but it was the first move that opened up the potential of the DI. When a year or so later I did 'Rang De Basanti', that one became very interesting because you know we needed a very distinct look for the portion that happens in the past. With costumes and the background, it was, of course, very distinct, but 'Binod Pradhan' wanted to take it further. So with the director and the DOP decided that as the old black & white photos you know get a tint in the skin tone, similarly

we would cover a part and then tint that portion again with the 'cyan' and another portion with may be with yellow and still another one with some other color. That way you will have one color stand out conspicuously. So we followed that line of things and it worked well with Binod Pradhan. At that time it was really pushing DI to the forefront without a doubt. It was a massive masking of certain areas of tracking, keying and windows, and it was really unbelievable. We had, so as to say, three rooms going with three different colors, all tracking a digital release. So in a way you are really forced to go through DI whether you like it or not. A DOP, I am sure, can cover many things to make it better, but you

know it's never perfect. Sometimes those inconsistencies are accepted but at other times it takes the viewer out of the movie. However, with the DI we can really make the things flow. Generally when you are looking for a flow which goes from one thing to the next evenly with nothing making the colors same but just keeping them in the same family,



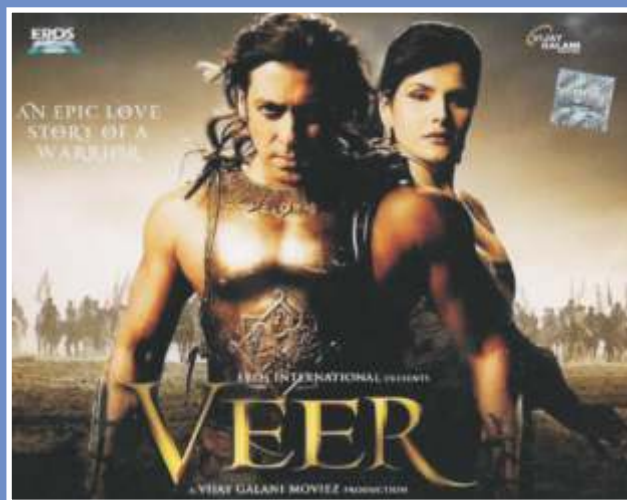
keeping them at relatively the same contrast. Now this is something that you can do only in the DI and it makes really a polished and fine product.

Earlier when the film was shot on the negatives, how much importance did the scanner carry with you in terms of scanning the negative ? And which is your favorite scanner ?

Digital acquisition has come a long way but when you are scanning, it's not the crispest image in the world. Nevertheless, after scanning when you look at the skin tone and the texture, you know it's all very pleasant. And then a 'film' too has its own problems--the scratches, lab processing, and the list is on and on.

Scanner is extremely important and even more important than that is how to set it up and who is going to set it up. If you have bad scans, there is nothing that you can do. If I have a scanner and it scans a little dark, I can brighten it up in the DI and it's not gonna degrade the image at all. If I scan and I don't blow up the contrast ratio of the film, then its gonna be a tough job to get





the same film contrast ratio. And if I don't have the eye for what a film should have looked, then it's gonna be very troublesome and very messy.

Each scanner has its own texture. So when you ask what's my favorite scanner, I would like to ask first what the job is? Some scanners like the "spirit" scanner as it has an inbuilt noise reduction system and has even the stuff to reduce the grains.

But sometimes people shoot in super 16 and they want it grainy. If you have a lot of experience with super 16, you can make it look like 35. So it's important to be very clear with your post production what you are looking for. If you are looking for grain, "spirit" has that noise reduction. And if you are shooting in low light in the night, your diaphragm is wide open, you are moving around and

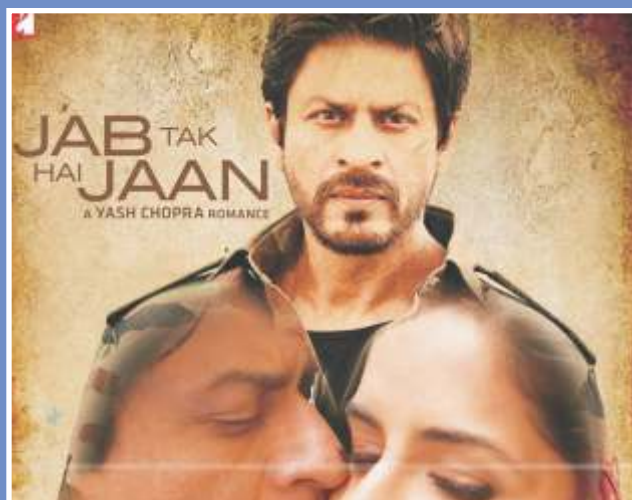
your focus puller is having a nightmare, in situations like that in the movies, perhaps it is good that we do it on "spirit" because that's gonna be a little bit more forgiving for apparent sharpness.

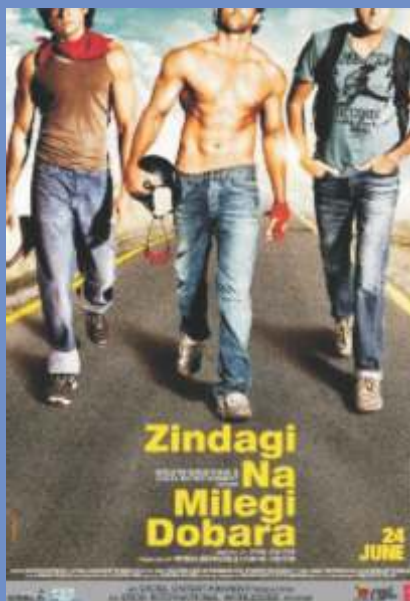
However, if something soft is there and you know it's not going to improve and at the same time you also want that organic feel, nothing will be like "Northlight". It's a beautiful scanner. These two are my favorites and I have spent a lot of time calibrating these scanners and I have spent a lot of time in color-timing that which has been scanned in less than ideal conditions. As a colorist I am only as good as my team and I am glad that the team I have has been very consistent and efficient.

In case of celluloid and the digital footage, how does your approach affect the DI Process?

It definitely affects your approach. When you know that the scanner has been set up and you know your scanner as well as the scanning team, then there's nothing going to be wrong. You also know what the DOP has shot and what probably he wants or something close to that. And then you can just start timing and with the DOP you can have a fine tuning. So you will talk to him just about the aesthetics and move ahead.

We prefer to work with the raw images because if something is a little bit thin, you know the sun's going down. Whatever might have happened, you have some play there and it might give you a little extra detail that makes a lot of difference in that particular shot since then we can make it look a lot better. If we have already put it in the dpx, then





we can't go back. You know if there are a great many details and your digital acquisition has been set to pull out the details too much, then you are likely to have a have problem as there will be big lines going through. But if you are dealing with raw scans, then you can just reduce and it becomes less apparent. So I would like to work on raw scans. Nevertheless, when you are working on the raw scans, it's a big gamble. You have to make sure that everything is setup correctly on the very start, including how the DOP has set it up on the set and with what data. You have to make sure you do have that and at the same time you have to have the freedom to change it if you need to get the match and to get what the story requires, even for things like the skin tones or even the skin texture. Some cameras are less forgiving especially with the hard light, so you have to look at that aspect too. You have also to look at how we can reduce the harshness on the skin.

Sometimes when the DOP shoots the film in different format- files, how difficult it becomes matching the shots?

Yes, at times there are a lot of mix formats. For instance, 'Son of Sardaar' was a mixture of films -- HD-pro, 5-D, etc. In this when you are moving from the one footage to another, maintaining a Flow is very necessary, and it is a very difficult thing. That's why a lot of time has to be spent on color timing. If you are a good DOP and you have a controlled environment, you can make it look amazing, but God forbid, if you are shooting and its exposure is going up and down, it's like taking a 'jpeg' file in photo-shop and trying to get details of the highlight. You know there's nothing there from which you may get the details.

Besides the color correction, what are the other possibilities in DI -- like modifying the frame, pan scan and things like that?

Imp films of ken as DI artist



INTERVIEW-Colorist



A lot can be done in DI as there are many tools. You can select a part where there is no detail, you can just do a key or you can do some stuff like that to help it. If the video is hurting your eyes, we can slightly soften it. Sometimes it helps to look more filmy. I am not saying to make the film soft but to just soften it a bit, you will get to know from the highlight which part is not so crunchy and then the next thing is to add a little bit of grain noise so that video is not completely nightmarish. There are also the tools like pan scan with which you can stabilize the things. Of course, that used to be a realm of VFX and indeed But if it's a simple shake, it can be removed easily. Especially when you are dolly in, little bits of jerks can be fixed.

Are the DOP's and the Directors aware of these potentials that this or that can happen or they just learn it when you are doing it ?

See, I think after one DI they have a very good idea of what's going on. So a number of DOP's are taking the advantage of DI in a positive way.

What is more difficult to achieve, the natural look in terms of color or a stylized look ? And how many days it takes you to finish a film ?

I think it is very hard to achieve a natural look. Once you have a pipeline in

place and you are shooting with somebody who is good at shooting, then it's not hard to achieve. But if your pipeline (means the whole DI setup) isn't perfect or he who shoots is less experienced or he is working under pressure, then it becomes difficult. I can do a beautiful job but if my lab isn't calibrated, you see the print in that case is not gonna look good. A lot also depends on which way the footage is coming in and who is confirming it since if they don't do it right, there is every likelihood of getting a bad scan and then it looks really atrocious.

For me the natural way is the best way and, therefore, I get the natural look first and only after that I attempt the style because then it's nice and it flows nicely. If it's a straight film, if it has been shot well, and if the edit is locked, I have done a DI in 5 days for such films. Generally, I would say, a regular DI takes about two to three weeks.

What is your unique strength as a colorist ?

When dealing with any sort of creative medium, it is certain amount of trust which is involved. When you paint a picture, you are not going send it to the local departmental store to get it framed, because you have spent six months making this beautiful painting

and, therefore, you are going make it sure that you take it to somebody you trust and he will do it right in the first place. I do not say that I am perfect. I can make mistakes but what I am saying is that I work very hard on the trust side of the things. If somebody asks me whether something looks good and if it doesn't look good, I stay quite. I do not it's beautiful unless it is really so.

I like the whole idea of telling a story and being a part of that I am helping via DI. Though it is a little portion of the entire film, still it's an important part for me. At the end when I sit down and watch the film and if somebody -- say a friend who is not from the industry -- sees the film and says, "Oh ! It looks great," and he doesn't know that I have done DI of the film, then I am really very happy.



Ken works with Reliance MediaWorks Ltd.
Film City Complex Goregaon East
Mumbai - 400065 India
Tel: +91 22 39808900 | Fax: +91 22 28431685
Web: www.reliancemediaworks.com

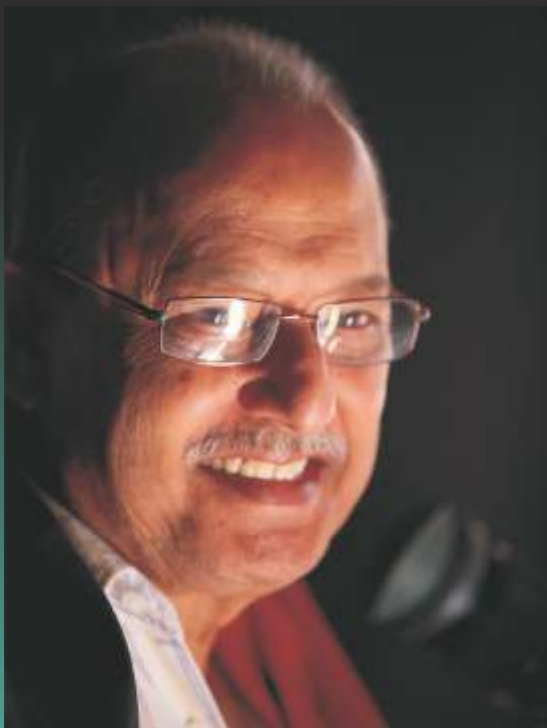




Master Reflects:

BARUN MUKHERJEE

The Master Walks Down The Memory Lane



A man who with the luxury of his cinematographic talent, made Lux beauties like Hema Malini, Zeenat Aman, Sri Devi, Meenakshi Seshadri, Juhi Chawla, Pooja Bhatt, Raveena Tandon, Aishwarya look at their luxurious best, an eye that gave Raymond men the look of 'Complete Man', a vision that captured Reid & Taylor Amitabh Bachchan in a fabulously gorgeous format, a crusade that added to the ad world the ravishing Emami smiles of Madhuri Dixit, the lyrical Liril dimples of Preity Zinta, a cinematographic 'mantra' that catapulted the magical luster of Samita Patil, Sushmita Sen, Deepika Padukone and many others to unprecedented illustrious heights, and a magic behind the camera that cast its spell for more than sixty five years to wrought on the screen the subtle sentiments of 'Baghban'.



BARUN MUKERJEE narrates about the various challenges he faced during different kinds of shoots in his long career spanning over thirty years in ad industry and feature films - the challenges which gave him a hard thinking regarding how to meet those challenges.

FIRST ASSIGNMENT

When I go down the memory lane, I find that my very first assignment was nothing but a challenge. After FTII, I have been in Bombay for more than four years struggling to get some work. All my colleagues had found something to be busy with...in the whole group I was, to be honest, the only black-sheep whose struggle had become too tortuous to be tolerated any more. So when I was about to quit, pack up and say goodbye to Bombay, I got a call for work, and that in fact was not a work but a challenge. It was a phone call from Hitendra Ghosh, a fellow acquaintance from FTII : " Hey Barun, there's a film to be shot for Shyam Benegal , Would you do it ?" When I was just thinking to tell him--"It's a joke to ask a blind man whether he needs eyes"-- Ghosh threw the challenge, " Well, see, this film has been refused by many since the film has night situation, but the location they are to shoot at is available to them only during the day-time. So you'll have to create night outside the



I was lucky that I got some very good and talented assistants. I am indeed proud of them- Binod Pradhan, Chang, Anil Mehta, Murli, Mahesh Anne, Vijay khambati--all worked with me for some time or more.

windows, and that too during the day. So think hard over the problem and only then give your reply." My mind was thinking fast : a 'no' means an end to my career even before a beginning ; a 'yes' means to agree to commit suicide even before I express my desire to live. "O.K.," I somehow managed to say, "I just want to have a look of the location, and only then I can give you the final reply." I still remember it was Grant Road in South Bombay. I had a close look of the apartment where they intended to shoot. It was on the ground floor of a very congested area, and naturally not very sunny. Then I asked them if I could have the choice of spots for shooting. They said that I could choose any portion of that room. I was bold enough to tell them that the things would need some sort of experimentation. They had no objection to that also. So I decided to take the plunge. And what I did was to cover the window with some five to six or even more layers of black net from outside, and then to lit up some bulbs of 500 and 1000 watts on the bamboo poles outside the



window. Inside I went on with normal day-light initially, but had to later give it some boost. Glass-panes of the window were closed. It gave a foggy vision of the electric-bulb light outside and the total effect was that of a night haze. Then I shot the film which to my good luck became a hit.

RAJAN SILK SAREES

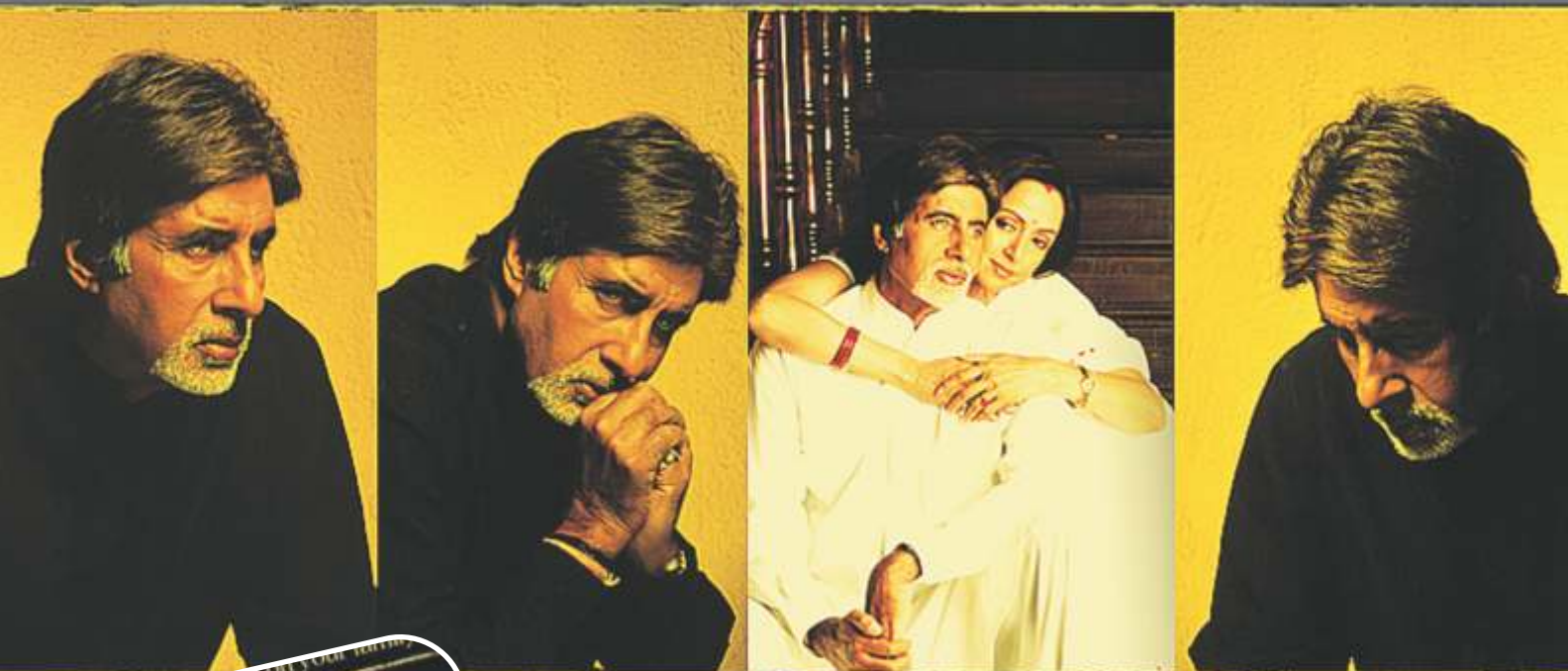
I remember another equally interesting episode. I have been in to ad world doing Forhans Flouride ad that sort of helped me get in to advertising market. Then I did Maharani Soap ad with Shyam Benegal and I was pretty busy .. One day Mathew Matthan called

me and said : " Barun da, there is a film on Rajan Silk Sarees. Actually, the film has been shot and rejected. They want us to redo it. So it is a bounced project and therefore has to be handled very carefully and sensitively. They want to have a meeting with us." So we went there and were told that the film is simple -- a woman sitting on a 'jhoola' in pitch black darkness gets in to light from nowhere and recedes back in to the nowhere of that very pitch black darkness. The Sarees and their colors have to be focused only for that split second when the woman gets in to light. I said : " O.K. We need one day to think about it." They consented. The

cameramen in those days used to do a lot of experimentation, and they never had the heart to say 'no'. So we tried out many things that day, experimenting a great deal. In the evening when we saw the rushes, we decided to go for the project. On the third day we shot the ad which fortunately became a hit and the things really started, as they say, happening.

To be honest, agency wanted nothing but the woman, the Sarees and pitch black darkness...no paraphernalia. I adopted a very simple path...just cut the light to the position that it falls only on

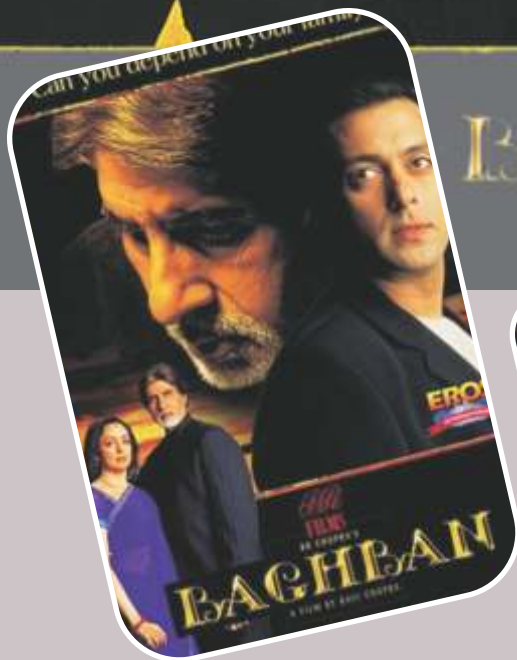




BAGHBAN

Can you depend on your family?

Important Films As DOP



the woman, and the rest of it is cut. So it was just a matter how you cut the light, and for that I decided -- not to use soft lighting as the soft lighting is difficult to be cut to precision. What I mean is that before the woman enters, I had kept a chink so that the focused moment was not a sudden jerk but just like the melting of butter--appeared...vanished. That did the magic. It was only a trick that worked with the grace of God. But it was an effort preceding the production.

LAKME AD

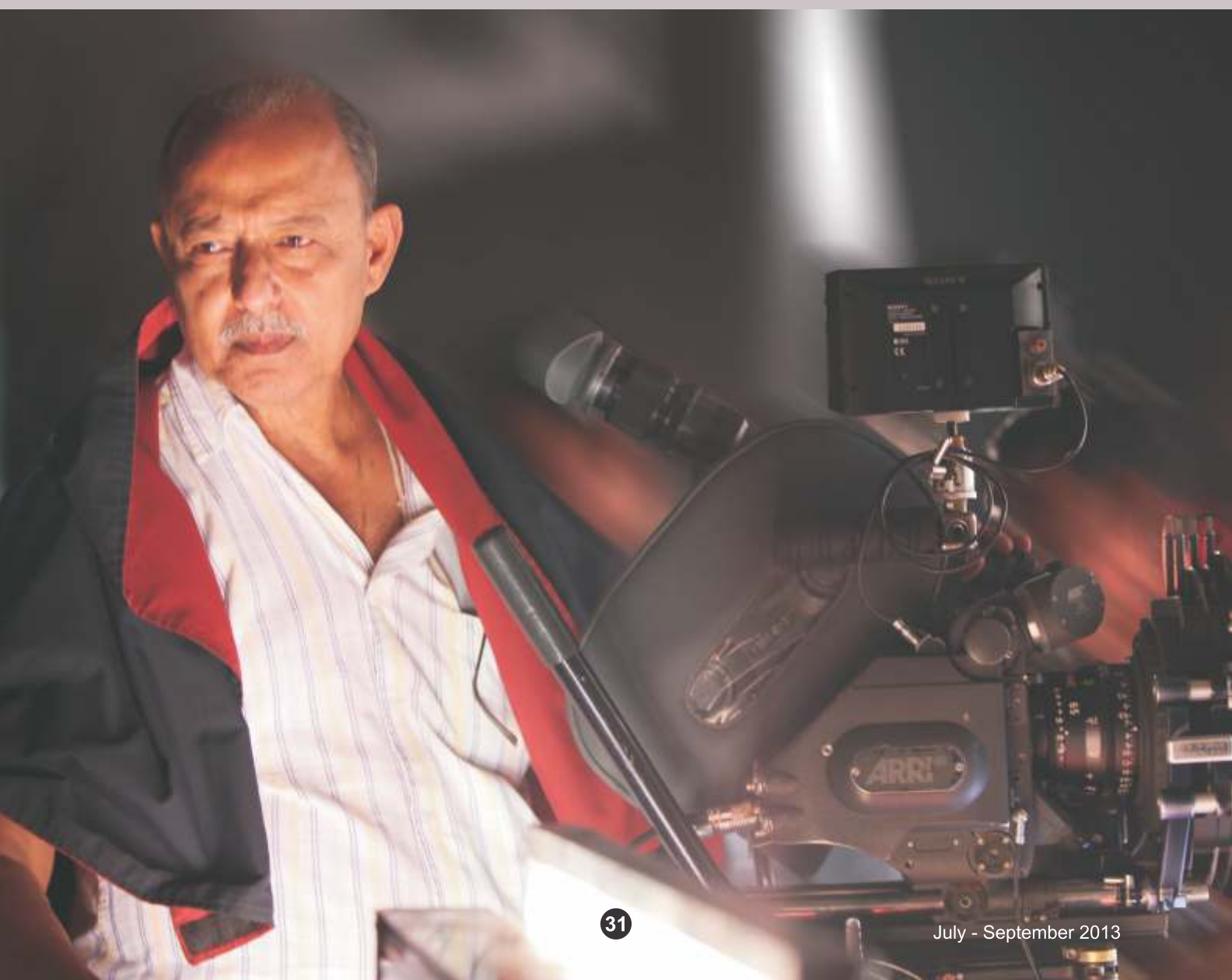
Now I tell you an episode that demanded for a post-production effort. It was a Lakme ad concerning nail enamel. Johnny Pinto was the director. He wanted to show only nails in color, rest everything in black and white -- the entire set, the woman, the hands, everything. So the set was made in black n white, most of the props were painted in black n



white, and the woman was dressed in black n white...even her skin tones were all in different shades of grey. But the entire film we shot is color. Then there is a process by which you can omit and retain any of the colors out of VIBGYOR. The tricky part was to think in terms of black n white regarding set, woman, props. In color, we can get the separation easily, but in black n white it was sort of a risk. I was really scared, praying to God all the while that this trick also works. And it did, thank God. I wish I could show you the results and the effects! Any way, Lakme nail enamel with Pinto till date with me is a film that I relished the most in terms of doing a film.

HAMARA BAJAJ

Ha! 'Hamara Bajaj' became a popular film mainly because of its jingle, and it was a jingle composed in a way by a cinematographer -- who else but me! Lintas wanted a jingle based on some 'raga'. Sumantra Ghosal, though much younger, is





extremely friendly with me. People used to say they were married to each other. He knew I used to sing a little and had had some initiation in Hindustani 'ragas'. So one day after the pack-up, we gulped some beer together, and Ghosal asked me to compose some jingle. I tried and tried but could think of nothing. So I went home, and the whole night my mind wrestled with the jingle. I composed about six tunes out of which the Lintas liked three, and after discussing them with the Loui Band my tune based on 'raga jay-jay-wanti' was finalized and Louis Bank ultimately composed the music and that is how 'Hamara Bajaj' materialized.

CHERRY BLOSSOM

'Cherry Blossom' ad happened much earlier. Sumantra Ghosal, had just started his production company. Obviously the budget used to be low, and there was little scope for post production. The requirement was the live shot of a shoe which must have a starry sparkle on it. We scratched and scratched our heads thinking hard what kind of light could reflect best from the leather. Incidentally, we were taking tea and, as it happened, the glass containing tea slipped out of the hands of some body. Its broken bits were lying on the ground where upon, fortunately for us, sunlight was falling. Suddenly I found the required sparkle being reflected from a broken piece of glass. I hit upon an idea. I got up with a jerk, picked up a very small splinter of broken glass and pasted it on a shoe placed in the area lit by sun light. Lo ! Cherry Blossom Sparkle was the outcome. The use of 'sparkle filter' was not a big effort, but that gave us the result to our full satisfaction.

So far as Charles Chaplin part of 'Cherry Blossom' ad is concerned, we saw a lot of his films and concluded that speed was the key to it. So we selected the range of 12-16 frames after a lot of experimentation. To give it the look of antiquity, we shot it in black n white. Most of the sets were

outdoors and the entire lighting was done from the top and we had to use stop exposures as well. Everything had to be done in the camera since the post production strategies were little attempted those days.

VIP-AD

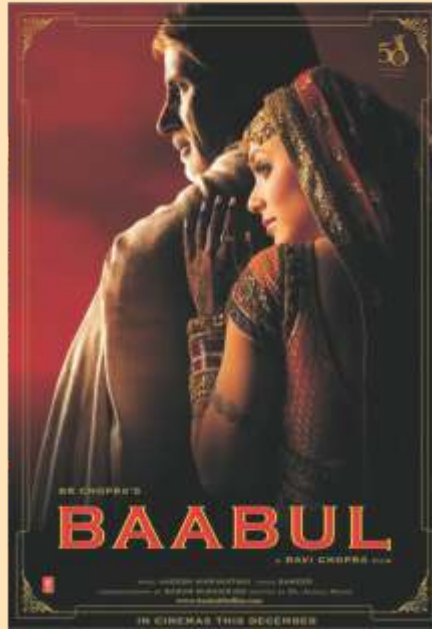
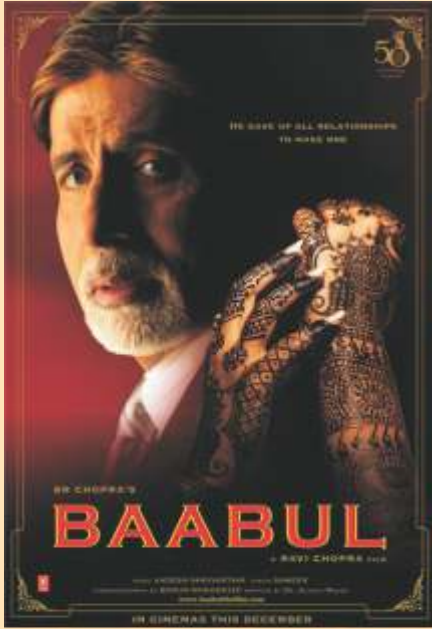
I have done enormous work with Sumantra Ghosal. VIP-AD IS my favourite film with him. To create the look of a railway station inside the studio was quite a challenge. The shots of train and coaches were, of course, added afterwards, but the platform was created in the studio. To give the effects of the length and depth of a real platform was a tough job, but we could create the

The glass containing tea slipped out of the hands of some body. Its broken bits were lying on the ground where upon, fortunately for us, sunlight was falling. Suddenly I found the required sparkle being reflected from a broken piece of glass. I hit upon an idea. I got up with a jerk, picked up a very small splinter of broken glass and pasted it on a shoe placed in the area lit by sun light. Cherry Blossom Sparkle was the outcome!





Important Films As DOP



When it came to water part, I put the focus on reflections rather than on water. I used a skimmer and that made the reflections move fast. Now due to moving reflections you don't get to the muddy layer of water below. The total effect was that of crystal clear water.



illusion by using extreme tint and the widest lens--probably was 75mm !!-- and rest with zoom lens. We did not use normal lens at all in that ad. The most memorable part was its jingle--'kal bhi aaj bhi'--which was done by me.

HERO HONDA

'The Hero Honda ad' --'Fill it, shut it and forget it'-- was shot in Rajasthan. The temperature was 49 degree Celsius and it was shot in a desert though what is shown in the film is an oasis. Actually there was no oasis in that desert, and the oasis was artificially created. A huge pit was dug and a plastic cover was put on all the sides. About 5 to 6 tankers of water were pumped into it. Palm trees were brought from Mumbai. And the real challenge was the camel which was to see the oasis, come running towards it, drink the water and to go away. The camel literally ran towards the oasis assuming it to be real and in no time drank water and ran away. The guys said that it would come again. And really it did come again, drank the water to its fill, and shook its head. I don't know how it happened, but indeed it happened and it shaking its head became the marvel of the ad ; it was as if the camel were literally saying -- 'Fill it, shut it and forget it'. I had to be very quick in catching its movements in one go. I enjoyed that film and it was really a wonderful stuff.

LYRIL - AD

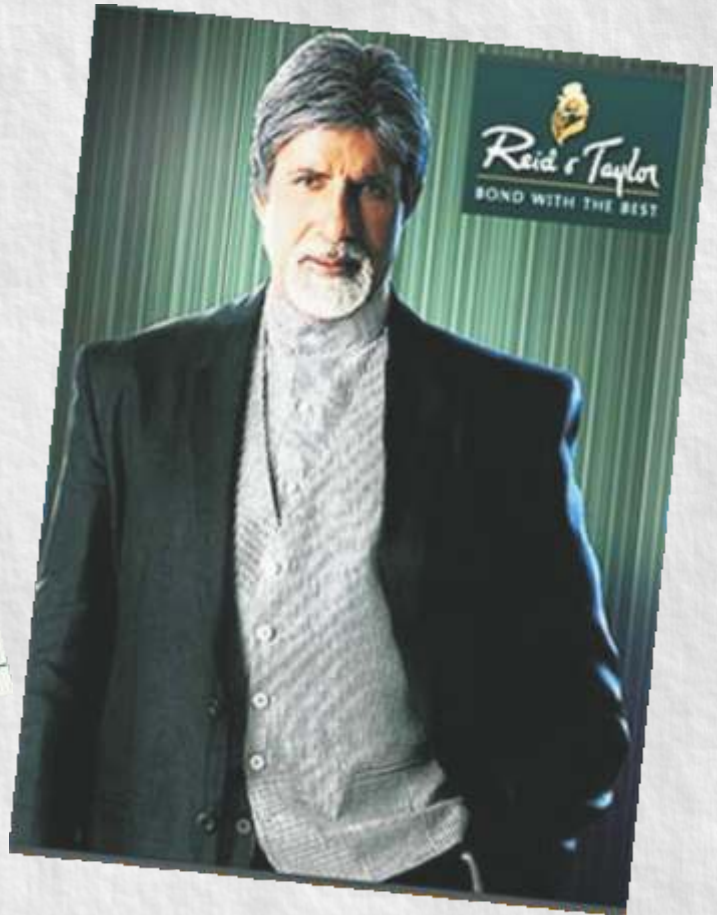
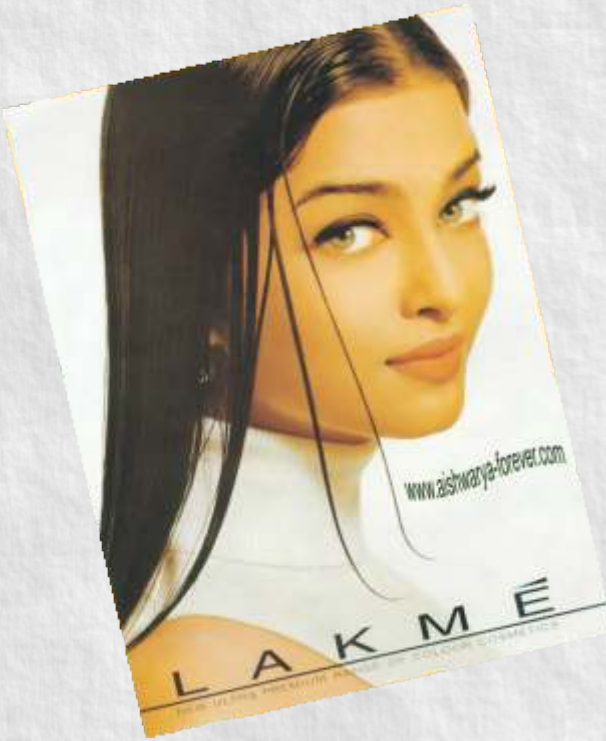
The 'Lyril ad' was purely a magic of lighting. It was done with Ram Madhvani. I don't know what were the constraints, but somehow the agency wanted to do it indoor. It took almost 3 to 4 days to create an artificial jungle and the waterfall was also artificially created. The water of the tanker was used, and needless to say the water was muddy-- certainly not as clear and clean as was needed to show a natural waterfall. But Ram insisted that the waterfall, the jungle, every bit of the scene must look completely natural. Though I had the heart to

say that it would be done, but fear lurked in my mind regarding how it could be done. Then I thought that the only thing that could be tried was to shoot the entire film from the top angle. But still the problem of lighting remained. It was a big area and so I decided to do the whole thing in sections. So I asked the lighting department to prepare banks of 5k light--two up, two down, and one behind with a little slant, and all the banks not in a straight line or even one above the other, but one here and the other there in a scattered way. The art department had put the plants and shrubs in big polythene bags. So when it was shot from the top angle, it focused only on leaves and branches. That way the jungle looked amazing. In the part where Preity Zinta is seen walking across the jungle, we used sort of back lights that were cut from the sides. When it came to water part, I put the focus on reflections rather than on water. I used a skimmer and that made the reflections move fast. Now due to moving reflections you don't get to the muddy layer of water below. The total effect was that of crystal clear water.

CEAT TYRES - AD

This ad was again with Sumantra Ghosal. It was shot in FAMOUS STUDIO in Mahalakshmi, No. 1. The set was big -- from wall to wall. Two cars were to be shown running at full speed. So I was given no space on the ground for lighting. I was almost in tears. The floor was made of some shiny surface giving wooden semblance. It reflected light so much that every where there was nothing but reflection and the car was looking horrible. The walls and all were looking fine but the cars looked ugly, floors looked ugly and before that I had never shot a car commercial. I was almost in tears.





This is vinyl thing, it's a translucent but not acrylic, it is soft plastic material -which is used very often by art directors, its like very big thin skimmer.

First completed lighting, the I had put that-soft plastic material close to the ground and just kept it to the edge of the frame, so that softener plastic thing was just out of the frame and far away from the source of the light, that helped to cut down all the spots. In the process I learnt a lesson : further the light from the softener, softer is the effect of light. That day I realized that a cinematographer can never say that he has learnt everything.

FILM VS-DIGITAL

To shift from celluloid to digital is just like leaving a rural child midst an urban setting. It would be difficult to adjust for him initially, but slowly he shall get used to the alien setting and steadily he must adapt himself completely. All my life I had worked with celluloid and I loved it. But then new techniques are bound to come. So though I miss celluloid, I am at ease with digital now. I am working mostly with Alexa but I have done some work with Red also. It may be that I am biased, but it is a fact that I enjoyed doing work with celluloid. However, rising prices put the logistics in favor of digital.

Similarly, in the past there was no DI. We had only RGB for color correction. However,

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In the process I learnt a lesson: further the light from the softener, softer is the effect of light. That day I realized that a cinematographer can never say that he has learnt everything.

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good films were made even then. There is no DI in movies like 'Baghban', 'Babul'. At that time people were very conscious that if there be a mistake, it would get revealed. So there was a precision in the working.

People were very particular about the quality of work and would pay a lot more attention to detailing. I myself belong to that category. People would complain that I took a long time to light up, but then we got good results as well.

I have worked with both big budgeted and small budgeted films. I have done some regional cinema also in Bengal. If the subject was good and I got a good director, then money did not matter much. Once I got the basic optimum amount, I would never rundown or reject a film because of money. I rather preferred a film on the merit of its content.

I was lucky that I got some very good and talented assistants. I am indeed proud of them- Binod Pradhan Chang, Anil Mehta, Murli, Mahesh Anne, Vijay khambati-- all worked with me for some time or more.

□□□



Amit's Nostalgic Tribute to Ram Gopal Verma

Amit Roy

"The self made man, who broke all rules to learn the craft himself creating a masterpiece on its own. Shooting the promos and the title song for "Hum Tumhare Hain Sanam", starring Shah Rukh Khan and Madhuri Dixit acted as an instrumental in landing him the opportunity to shoot films. He had an opportunity to work on many music videos with Ken Gosh. He got his foot in the door of a career by working with well-known Director- Ram Gopal Varma. They together created dramatic thriller making the "angry young man" a political overlord with "Sarkar" and "Sarkar Raj", as its sequel, "Nishabd" which challenges the conventional theme movies. He plays brilliantly with light and shade from imaginative angles in "Rann". He envisioned the films like heartwarming debut film of Shahid Kapoor and Amrita Rao "Ishq Vishk", captured Goa in glowing colors in "Dum Maro Dum", "Fida" and "Dil Maange More". In this interview he describes his journey of self made cinematographer whose passion for cinematography helped him in achieving artistic and technical decisions."



Important Films of Amit As DOP



How did you start cinematography and when did you begin your career as a cinematographer?

My uncle was a prominent documentary filmmaker back in Delhi. Sometimes my uncle asked me to come along on shoots and on such occasions I would just hang around with him. So I started getting a lot of experience on sets, just as a guy who runs around doing everything--from production to carrying equipment and doing all sort of things. At that time I wanted to be a director and as such I started reading about the journey of directors and discovered films of Satyajit Ray. There from, somehow it became obvious to me that one of the most important relationships that a director should form is with the camera because it's through camera that a director has got to tell a story visually. So I started dabbling a little bit with still photography.

My uncle had a 16 mm camera which he used to keep under his bed in the house. Being the youngest member

of the crew the responsibility of that camera almost came upon me as he didn't really have a camera attendant. So I would lock the camera, spend more time with the equipment and learn to load magazine, change lenses. By the time I got out of the college, I wanted to sort of branch out of my own.

In Delhi the opportunities were quite limited, but there was a lot of television work happening. So I joined as a production assistant for a while. This production house used to produce a show called 'Namaste India' and it was basically a travelling show. In one of the episodes we had to shoot in Mauritius, and the cameraman for that show was Mr. Kabir Khan who is now a very prominent Filmmaker. Kabir was quite an inspiring person and I went as his camera attendant.

In my spare time I will be shooting some stuff on my own. One day Kabir wanted to shoot one nice sunset sort of a silhouette shot for the end of the episode. But for some reason he was not able to find any interesting enough image. As Kabir went back to the hotel, I went and shot something. When I came

"I started shooting a lot of music video on 16 mm and that became my sort of film school and somehow that made a lot of impact. It is completely a cinematographer's format. There is no story-telling in the sense of fiction. So you learn and develop the ability to shoot very fast with very little resources. That gave me a lot of confidence and courage as well as an understanding of film shoot and the mysteries of film negative"



Important Films of Amit As DOP

"One thing I wanted to do in sarkar raj -was not to make it bollywoodish, where we are obsessed with making heroes, heroines and locations look good. In bollywood ,we were not at all exploring texture, darkness. I knew that " sarkar raj" was one great opportunity where we could create something which was against that sort of predominant movement of mainstream."

back and showed that to Kabir, he was quite surprised and he really liked some stuff. Later that evening our director, as per her habit, was viewing the footage. Suddenly she said : Hey Kabir, very nice shot. To that Kabir replied: That's not me; that is Amit.

So an interesting break-through I got there was on the last day of the shoot which was supposed to be a holiday for the whole crew. However, my director still wanted to shoot some shots of the city. So she said, 'Amit, would you like to shoot for me?' I was more than happy. So I went with her and we shot certain things.

Very soon I was given for direction some tv shows and I was pretty young then, maybe 22 or 23. I was directing some television shows for a Production house wherein the talent was very limited and I used to find it very frustrating shooting with some other cameraman. So I started shooting stuff on my own. Then I decided to come to Bombay. I tried to acquire as much knowledge as possible. But still I almost didn't have any formal education. Now

by that time there were already many people who had started asking me whether I would shoot a film because they liked what I had shot on video. Since I have not gone to any film school and I have not assisted anybody, so i thought of spending some time in assisting somebody.

So I think that around that time I made a list of three or four cinematographers whom I really admired for their work, but they had a long list of assistants already working with them. And then I myself was always in two minds whether to be a director or a cinematographer. At that time this gentleman named Sunil Sippy was making a feature film . So I joined his crew as assistant Director and I thought I really wanted to get back into direction. I worked with him to set up the film quite a bit and Ravi K. was going to shoot the film. I spent some time interacting with Ravi K. during that process. However, I couldn't complete the shooting of the film because I also started getting a lot of camera work with MTV, Channel V and other such Channels. So finally one day Sunil told me: Listen. I think you would

probably be better off concentrating on camera work because I think you have a good eye. So focus on that and leave this. So I left direction and went back to cinematography.

I met Ravi again and this time I asked him if I could assist him. And Ravi said : yeah definitely, in fact, tomorrow morning only. I am shooting an ad in Mud Island . You come tomorrow and start working. So I was probably some sixth or seventh boy of a set and it was possibly the worst day of my life because I just couldn't do anything right. I could not even hold a thermocol properly and as the day went by, I immediately realized that I am not cut out to be an assistant because I already seemed to know a considerable amount of things about lighting and other things. Somehow while watching him shoot, it started seeming very simple and the mathematics of cinematography began to reveal itself. I started thinking that I understand light, I have a great sensitivity to light and lighting, and I have good sense of composition. So translating this to that in a film is not going to be any remarkably difficult. Therefore I decided that I should never go back to assist and I concluded that it's very important that I must discover my own craft instead of spending time at learning from others. So if I had spent time in learning the things from others, then I think I might have got lost. I was just a step short of being a cinematographer and I think my DNA generally works better when I can discover things of my own rather than by learning or on being taught.

How did you break in to the mainstream cinematography and when did you get your first break?

I was shooting a lot of things for the Television during the late 90's and early 2000. It was



Important Films of Amit As DOP



So by the end of 'Sarkar' I was already worried since I had done all those bold things and didn't know how bollywood would receive or react to my work. Thank God that the week 'Sarkar' was released, I got close to 30 films all of which, of course, I didn't do, but the impact that I think 'Sarkar' had made was quite memorable.



There is an iconic shot from the film which stayed with the memory. For instance, the close-up shot of the hand and the crowd behind. I just happened to be on a zoom and Mr. Bachchan was actually waving towards the crowd because there was a huge crowd gathered outside the location. So I just zoomed, framed and rolled the camera. Now it is Ramu ji's genius that he instantly recognized that it was going to be an iconic sort of shots

a very good time for music videos. I started shooting a lot of music video on 16 mm and that became my sort of film school and somehow that made a lot of impact. It is completely a cinematographer's format. There is no story-telling in the sense of fiction. So you learn and develop the ability to shoot very fast with very little resources. That gave me a lot of confidence and courage as well as an understanding of film shoot and the mysteries of film negative.

It was because of the music videos that I got to shoot one film song that was actually stuck since a very long time. So I shot this promo with Shahrukh and Madhuri and because the promo looked very good, they gave me the title song to shoot which was choreographed by Farah Khan. That promo was seen by Ken who was making his first film 'Ishq Vishq' and he approached me and that's how I got 'Ishq Vishq'. By the time I started 'Ishq Vishq', I was pretty confident of my cinematography-abilities.

When you got a major break like this, what kind of preparations you went through to prepare yourself for this particular project?

I was not sort of overwhelmed by the fact that this was my first independent movie. It was because I knew that everybody one day was a newcomer and then I also had that sporting spirit of not bossing over others. In fact, there was a lot of youthful energy in me. Once you start shooting, the process of film making in itself is so exacting that you on a day-to-day level get so involved with the integrity of how to execute each shot. So you are almost going from shot to shot. You somehow are prone to actually lose the side of the larger picture. You live for the moment and you do the best for that particular shot and for that particular scene. Of course, your learning curve is also there, & maybe you make a lot of mistakes also.

As you said that when you shot music videos, you had more freedom in the sense of continuity of lighting, in terms of mood etc., which are more important in a fiction-feature film than in the music video. So how did you adjust in a different school of thought?

I had studied enough cinema from a directorial perspective to understand the visual narrative. My

decision to start off as a cinematographer came from studying directors and how they were using the camera. I was influenced a lot by Ray and Polanski. I had a fair view of how Polanski was using 'Lensing' in his films. So I had a reasonably comprehensive understanding of the masters.

I always felt that my ambition of the kind of thing I wanted to do during 'Ishq Vishq' and the scope of that film were not matching. They wanted to put every color and I preferred a very sparse use of color. Now when I look back at my work of what I shot in 'Ishq Vishq' I feel awkward and I am almost embarrassed. It just seems from another era and I can't just understand what made me take those decisions. It almost seems that I was just going along with other people's vision or what they called me to. Then after 'Ishq Vishq' I got 'Fida' which had a bigger budget and bigger cast. In the meantime I also got a very interesting film which hugely disappointed me as not many people got to watch it. It was a film called 'Let Us Enjoy'. It was a film I shot on 16 mm. I shot it in Delhi and it was directed by a young director-duo Siddharth Anand Kumar and Ritu Tiwari. I

did not even get a proper lab and I still think it possibly the most refined negative I had ever shot because I shot it so implacably. Then after that I got 'Fida', and then I shot 'Dil Mange More'.

You have worked with a prominent Director like Ram Gopal Varma. So how he discovered you ?

Life would have been very different for me if I had not met Ram Gopal Varma. I think the seed of my association with Ram Gopal Varma goes back to the time when I saw 'Satya'. I was quite of stunned by 'Satya'. Similar was the case while watching 'Company'. I told a friend how I wish I could just shoot a film like that.

Sajid Khan was making his debut as a director. Basically he was directing one segment of the film named 'Darna Zaroori Hai'. This was a horror film. Sajid wanted to start the film with a particular shot where the camera literally starts with darkness and you hear the sound of laughing and it comes out of the mouth of blackness. So apparently the story goes that he narrated the shot to a foreign DOP and some post production house said that some 10 Lakhs or 15

I am not a selfish cinematographer in a sense that I don't care too much about my career. I care about the career of the film and I care about what the director stands for. I think my strength is in being a great vice captain.



Important Films of Amit As DOP



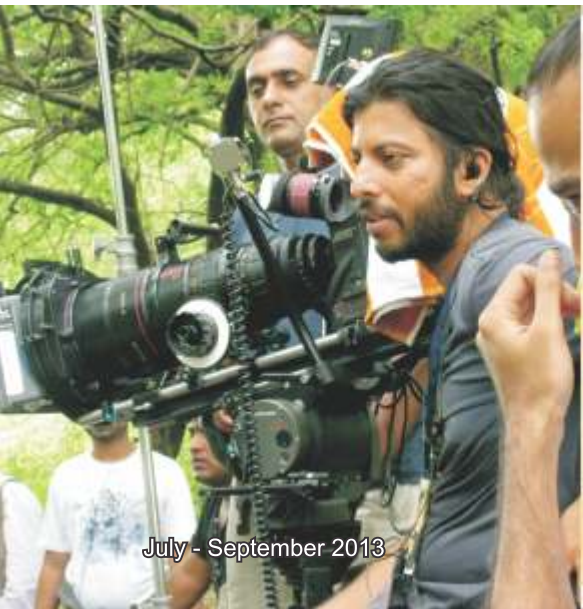
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I try to imagine the story of light around the story that you are telling. The story that you are telling might be the story of three people in this room but I try to imagine what's happening in the world outside and the world around.”

Lakhs of Rupees would be needed to do the shot. So Sajid met me and the first question he asked me was the question about this shot-- How you gonna do it? I said: Simple. I need a Zoom lens and a Proxa, and that's it. He was quite astounded. So he immediately signed me to shoot.

Now coming back to Ram Gopal Verma, one day a Senior Executive Producer told me that the boss wanted to meet me. So I walked in and without even saying any 'hi-hello' to me, the first thing he told me was: "Amit, there is a very interesting film which I want to produce and I think it will be very good for any cinematographer. I want you to shoot it." To this my first question was: "Are you directing it?" He said, "No". Then I said that I didn't want to shoot it. He was stunned and asked, "Why?" I said, "It was because I work for a Director and I can't work for a Director whose choices are being made by a Producer!" However, I added: "I am a huge fan of your work. At any point in your life if you feel you are going something to shoot, I will immediately come and shoot."

So I think it really impressed him that a struggling DOP can come and refuse him straight away within half a minute. So he said, "O.K., Sure." I went back and shot Sajid's film and I think he was quite happy with that. Then one day Ram Gopal Verma was watching TV and he happened to watch a music video which was shot by me. And it was quite providential that he was very impressed with that and he immediately asked if anybody knew who shot it. Then one of the persons--that very Senior Executive Producer who had earlier introduced me to Ramuji--said that he was the same guy who shot Sajid's film. And Ramuji sends me SMS asking me if we could meet.

When I met him, he said: "Amit, I remember our first meeting. Now I want to tell you that there is basically one thing which is very good about you and one thing which is very bad about you." I asked what the good thing was. He said: "I remember some six-seven months back I offered you one film which within a second you refused to do and you had a valid reason. So you are somebody who





knows exactly what he wants." Then he said : "Now I will tell you the bad thing and this is that I am also exactly like that. So it's quite probable that we may clash." Any way, he told me that there was a film named 'Sarkar' that he was making and he wanted me to shoot that. That for me was a big game-change. I had never known anybody like Ramu ji in my life and I don't think there is anybody who liked Ramu ji in this universe. But as I started interacting with him and started shooting, my entire perspective of life and cinema and thinking radically changed.

Since 'Sarkar' was inspired from the landmark film 'Godfather', expectation level naturally goes high. So how did you match that level ?

I was nearly petrified and mind you it had got nothing to do with 'Godfather' film . I did not care about 'Godfather' while going into 'Sarkar'. I just cared about the fact that I didn't want to look stupid in front of Ram Gopal Varma and, then, I was doing a film with Amitabh Bachchan ! I spent sleepless night before the shoot of 'Sarkar', just visualizing the scenario of maybe goofing up with something and Ramu ji.

I mean he was known to be so at that time. If things were not working out as he wanted, he would change people. You could not take anything for granted with Ramu ji. So actually there was an enormous pressure. He used to operate the camera himself and he was a phenomenal operator. Now of course the videos have come on that still but he had a very strong and acute sense of composition. So he was very finicky about camera operation.

Before 'Sarkar' I had seen 'Godfather' four or five times. It belongs to different sort of a period. It is a different art, different aesthetics, different kind of actors and different kind of skin tones. I was very clear that you can't even try to go in that direction.

One thing I wanted to do was not to make it bollywoodish, where we are obsessed with making heroes, heroines and locations look good. We were not at all exploring texture, we were not exploring darkness and we were afraid of darkness. So I was revolting against that kind of cinema. I knew that this was one great opportunity where we could create something which was against that sort of predominant movement of mainstream.

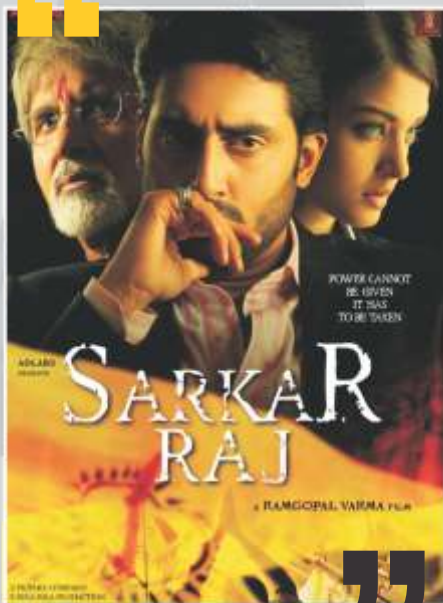


Important Films of Amit As DOP



Important Films of Amit As DOP

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I thought it to be very interesting to take the biggest and the most iconic Indian actor and look at him in a way that Bollywood can't even imagine. So that was my mindset when I went to do 'Sarkar'.

I think it's a strange chemistry that happens to two people of similar temperament when they are working together. There are so many times where a particular composition is only Ramu ji's idea in 'Sarkar'. And then there are other times as well when there is an iconic shot from the film which stayed with the memory. For instance, the close-up shot of the hand and the crowd behind. I just happened to be on a zoom and Mr. Bachchan was actually waving towards the crowd because there was a huge crowd gathered outside the location. So I just zoomed, framed and rolled the camera. Now it is Ramu ji's genius that he instantly recognized that it was going

to be an iconic sort of shots. So our relations sort of evolved like that where we have very little memory of who contributed what.

And for me Ramu ji was not a model just only for cinematography. He was for me a complete film school, and not only a film school but life school as well. And by the time I was done with shooting 'Sarkar', I was actually beginning to get very worried. One particular incidence is quite a landmark incidence. I did one particular scene with Mr. Bachchan. After the rehearsal he came to the video assist to see the playback. He said, "Amit, I hardly have any light on the face, particularly on the eyes and it's quite an important scene." Now I was very sure that this thing has to be lit exactly like that. So I told him: "Sir, trust me, this is perfect." He did not agree with me. So he told Ramu ji that the lighting was very dark. However,

Important Films of Amit As DOP

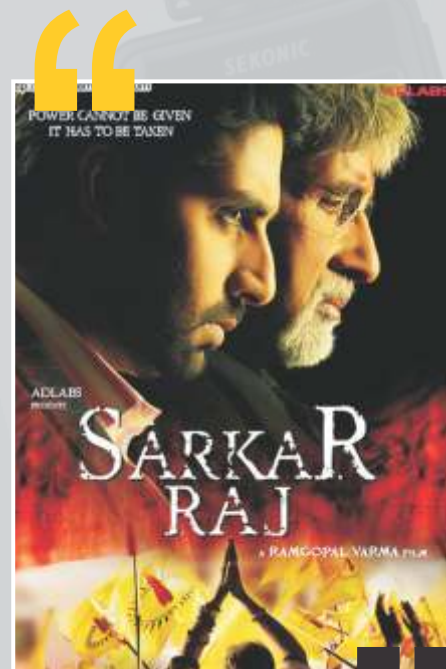


Ramu ji had developed such a deep trust in what I was doing and had such a strong regard for it that though he called me and apprised me of Amit jee's doubt about the lighting, he allowed me to do the things the way I was doing. So Amit jee grudgingly went back and gave the shot. Later, after he saw the film, Mr. Bachchan giving me a sort of credit complimented me by saying that the performance worked in that scene only because of that light. As an actor he has all the abilities. But as a human being too he has all the graciousness to be able to accept the fact that you were right and he was wrong and has the heart to give a compliment to somebody for the conviction. So by the end of 'Sarkar' I was already very worried since I had done all those bold things and didn't know how Bollywood would receive or react to my work. After all, my chances of getting other films depended a great deal on that. Thank God that the week 'Sarkar' was released, I got close to 30 films all of which, of course, I didn't do, but the impact that I think 'Sarkar' had made was quite memorable.

How do you design your lighting scheme ?

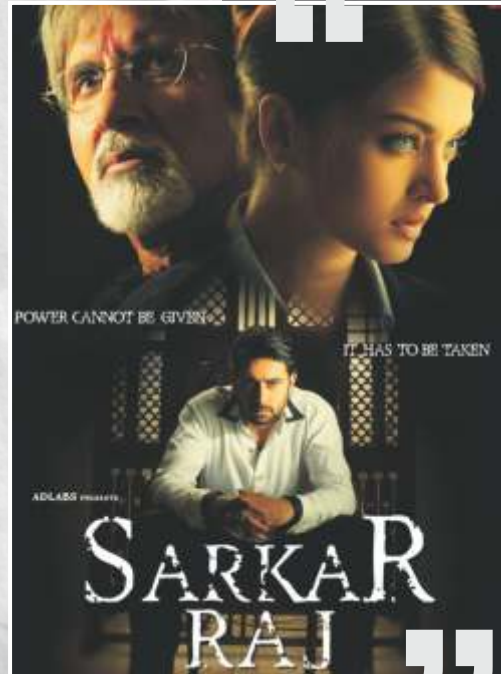
First I try to find the lighting geography within a scene. I try to determine what time of the day it be and where the sun would be. These are the basics before you start evaluating whether you want to work just logically or you want to create some kind of emotion. During a lot of my work with

Ramu ji, I was able to create an emotion with the light. Initially I would sort of watch a rehearsal before I set up a shot. The purpose behind this is to try to understand overall geography of what the actors are doing in that scene. That way I would decide that one big light source will come-- say -- through this window. Now whether that light source affects my close-up or not, I would not bother. But I must first define in my head what is the story of light for that particular scene.



I really feel that light makes an impact on our lives and light has a story of its own which when combines with the story of the people, some mood is created with its impact.

Now what I want to say is that this impact is quite different from the impact of the logical source of light. For instance, you know light does many peculiar things. You might think that logically sunlight comes through a window and sunlight hits the floor and it also hits bit of the walls, then it bounces off and again bounces back from the ceiling and creates a sort of wrap in the room. But, then, why we should discount the fact that there is a car standing outside the house and from the windshield of that car the sunlight is reflecting at a peculiar angle. Now that may be completely illogical, but as a cinematographer I would light something like that. Now the story becomes even more interesting because the fan is rotating. Now if the fan is rotating, then at a certain angle there is a blade of that fan and we may further reflect that slash of light in another direction .



Important Films of Amit As DOP

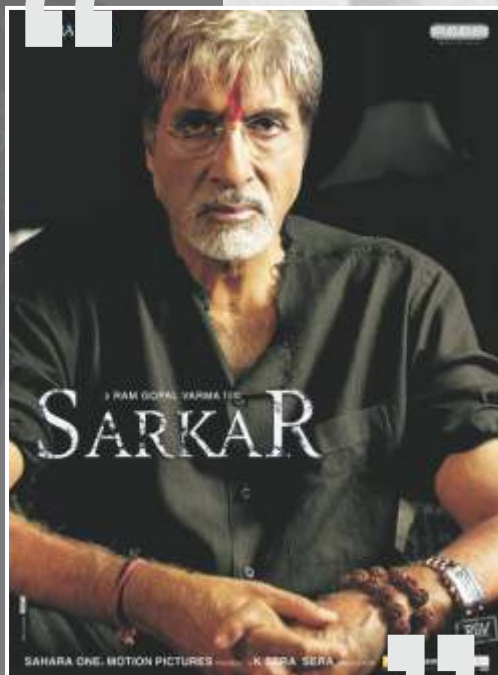
So what I mean to say is that I try to imagine the story of light around the story that you are telling. The story that you are telling might be the story of three people in this room but I try to imagine what's happening in the world outside and the world around. Then I also try to imagine what the secondary characters are doing who might not be in the frame. For instance, say one tube-light is off. I say to myself why that tube-light is off and who switched it off. Sometimes it happens that we leave one light on in the day and therefore for me the real interest is in the imagination of these aspects around the scene that I am shooting.

So that leads to many a risks for me as it makes my mind wander and start thinking about many other things apart from the film, apart from the scene or the story or the main character and that makes me come up with something that you know we do in terms of taking wider lenses. So these are ideal situations wherein all seems to be coming from imagination. But then sometimes it also comes from how a director wants to capture a scene.

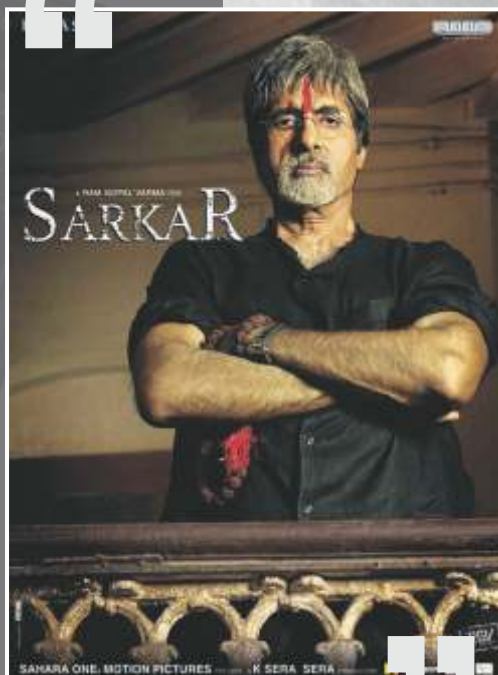
Could you recite one special scene from Sarkar Raj on a moment based on Lightning and Shot taking?

In Sarkar Raj, Ramu ji started moving a camera a lot because he wanted a sense of constant motion. So lot of time while I was operating the camera I would have to designed the lighting in the sense that I could actually pan camera anywhere at





Important Films of Amit As DOP



any point. Sometime they put one big circular trolley and kept one character sitting while somebody else talking. The camera was moved in a circular motion around the character in-order to catch what he is thinking at that particular moment. In such a situation the tough task was where to put the light? So I stopped putting lighting inside. A couple of big light sources outside the window were put and then throughout the scene I would manipulate the light as per requirements. A relationship of Cinematographer is built with the Director when one starts creating a similar sort of working pattern.

In a particular scene in the movie where Aishwarya comes to Sarkar's home for the first time and they sit while Sarkar already is in the middle of the conversation with some other politician. Sarkar being central character is surrounded by 6-7 more characters in this Ramu ji wanted to create a dynamic scene without cuts along with the sense of unpredictability of who is being focused while actors were performing.

I just created one strong source light and manipulated it in such a way that for some actor it was very strong back light, for others it was a little fill light bounced back and for rest it will be a strong hard front light falling on their eyes. This scene was shot in 6 different perspectives of each character point of view making each one at time the central character. So we created a working pattern where the actors were free from the dynamics of lighting and the



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"When I met Ramu jee, he said : 'Amit, I remember our first meeting. Now I want to tell you that there is basically one thing which is very good about you and one thing which is very bad about you.' I asked what the good thing was. He said : 'I remember some six-seven months back I offered you one film which within a second you refused to do and you had a valid reason. So you are somebody who knows exactly what he wants.' Then he said : 'Now I will tell you the bad thing and this is that I am also exactly like that. So it's quite probable that we may clash'"

camera became sort of almost a free floating entity.

Don't you think that it was a kind of compromising in terms of detailing required for light up because the director demanded a lot of camera movement?

I think for that particular film it was right. Today if I am asked to do the same thing, I perhaps won't do it. For instance, in my entire career 'Sarkar Raj' was my most satisfactory work because in 'Sarkar' I was perhaps actually discovering things as I was not on the top of my craft. But 'Sarkar Raj' is one film wherein from the time Ramu ji narrated it to me what he wanted to do, I almost succeeded in doing that.

Now whenever I watch it again, that film seems to look exactly how I wanted it to look. I think as a cinematographer we can't be self obsessed and forget that when an actor has already done a master shot, he is in that emotional flow. And if you break his flow for half an hour just to shoot his close up, you have broken the main backbone of that film which is the actor.

As a cinematographer we must treat the actor as being very important. I don't mean making him look good or just glamorizing him. We must glamorize him when the situation demands, but what I mean to say is that first of all we must serve the purpose of the actor.

For night situations you know though there are high speed stock, but still how you approach the night kind of photography?

The set you have to start from is almost zero as there is no light source. But if you have to light up a location, I try to see what is going on there. Then my first instinct is to actually make use of whatever is going on. Then I immediately try to manipulate how I can refine it a bit more. For example, if I have to shoot your close up right now, I would do nothing but just cut the flare from the window to you because it's perfect since you got a beautiful light source. There is no need for me to cut that and then artificially try to create that. My mind works in terms of what I see, what I like about it and what I don't like. I cut away what I want, and only then I add or subtract little things.

What is your strength as a cinematographer?

I think my strength as a cinematographer is my ability to do with whatever I have. And this is just something I gathered over years. I developed this ability to just walk into the room and find one great frame that I think would enable me to shoot without doing anything. I think that strength is something that definitely stood me to give me a lot of success with Ramu ji--I mean my ability to just make things happen very fast while seemingly not



I really feel that light makes an impact on our lives and light has a story of its own which when combines with the story of the people, some mood is created with its impact.

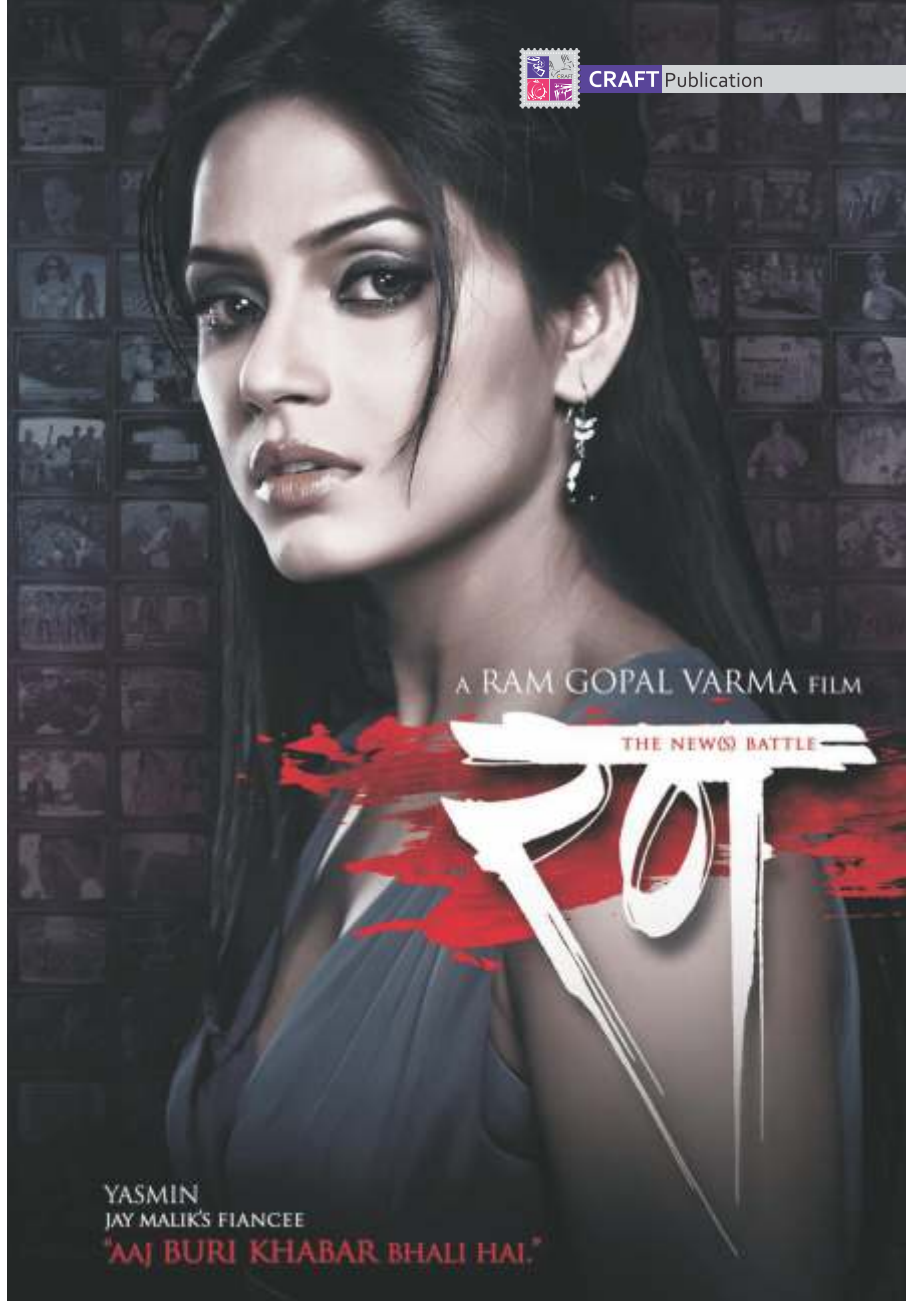


compromising on lighting. I am not a selfish cinematographer in a sense that I don't care too much about my career. I care about the career of the film and I care about what the director stands for. I think my strength is in being a great vice captain.

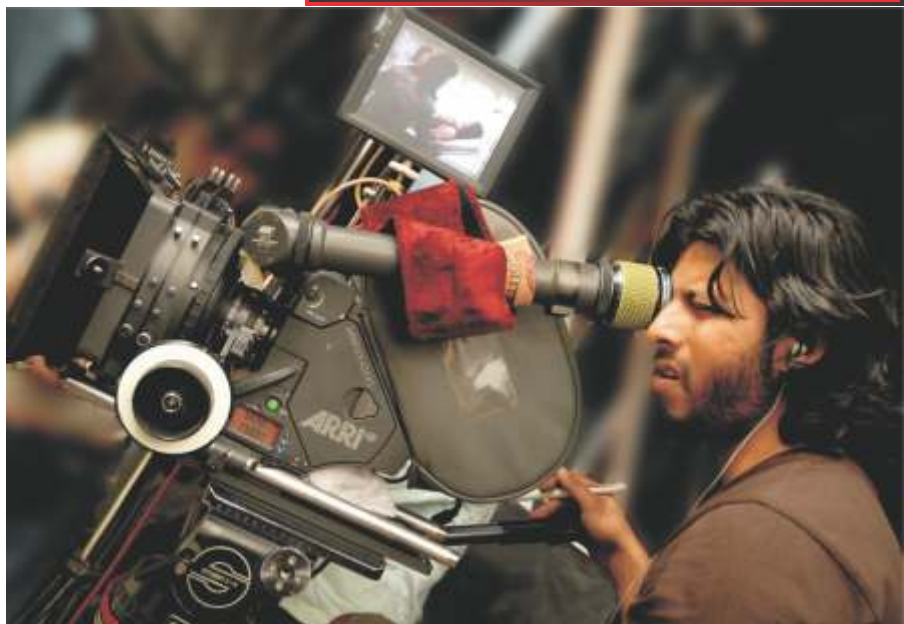
Since you have been trained on the hardcore 35 mm practice for many years and now particularly, say, for example, for the past 3 years it is more of either the ALEXA or some other medium, what you think as a cinematographer you have lost and what you have gained in terms of visual aesthetics?

I think one thing that digital has done in particular is that it has definitely made the playing field level. It took few years to crack the mystery of film negative, processing, interpreting light mathematically and then be able to record it accurately on a negative and then be able to print it exactly what was needed. So there was a fair amount of skill and training and some hidden trial for each one of us to have that sort of mastery.

But with the digital, there may be a 3rd year student in some film school who has spent just two years with the ALEXA, even that person is quite likely to shoot something as nicely as I can. You know the experience is double its source. Why I say it is double its source is because experience also makes you fearful; it also robs you of courage because it makes you wiser. And as you start becoming wiser, you stop taking bold decisions. Inexperience is great you don't know what you are doing and while doing some courageous things, you just happen to discover new things. So I truly believe that experience is not the greatest thing.



Important Films of Amit As DOP



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VIDEO SYSTEMS


Ki Pro Quad

WONDERFULLY VERSATILE AND ELEGANTLY SIMPLE.

"AJA's Ki Pro Quad is a great little device that will extend the life and usefulness of many professional video and HDSLR cameras. Here are the highlights of the Ki Pro Quad

MANAGEABLE 4K

The AJA Ki Pro Quad 4K Solid State Recorder ingests raw footage from a camera, and performs up to all three of the following functions simultaneously: stores the footage to an SSD, transfers the footage to a RAID or Thunderbolt-enabled computer, and outputs the footage to up to two displays for monitoring. Enables a powerful yet manageable workflow for 4K. Ki Pro Quad serves as a central gathering point for the main needs of 4K production; bring camera signals into Ki Pro Quad and then simultaneously create edit-friendly 4K Pro Res files, output to 4K monitors and record RAW data directly to Thunderbolt-enabled computer/storage system. 4K content needs are growing. Ki Pro Quad helps ease the transition to 4K with a recorder that creates smaller file sizes while still retaining quality.

HD NOW, 4K WHEN YOU NEED IT

Supports 4:2:2 and 4:4:4 recording even at HD and 2K resolutions. Real time

scaling from 4K to 2K/HD. Shoot 4K but record 2K to keep file sizes down but still have theatrical quality images to work with. HDMI output allows connection even to HD consumer monitors. Ki Pro Quad can cover your needs today and into the future.

POWERFUL

New hardware-based features, such as real time, high-quality RAW debayering, recording directly to 4K

resolution Apple ProRes files and real time scaling from 4K to HD. Only AJA can deliver advanced features like these in such a compact package.

AFFORDABLE

Ki Pro Quad is priced substantially less than other 4K recorders but still has the power and functionality for the demands of 4K productions as well as functionality not found in recorders of ANY price.





FAMILIAR

Ki Pro Quad follows the same tried-and-true principles that have made the rest of the Ki Pro family successful, creating high-quality, low-bandwidth ProRes files up to 4K resolutions, that can be easily offloaded to any Thunderbolt-enabled Mac via AJA's new SSD Thunderbolt reader. The resolution may be different, but the process is the same. And with the same capabilities of Ki Pro Mini for remote control, automation, ease of use and mounting options, the transition to Ki Pro Quad is virtually seamless.

4K AND HD MONITORING

At 4K resolution, the ability to check focus and exposure is critical. The only way to do this is with proper, full 4K monitoring. Ki Pro Quad provides a full resolution output that can be fed to 4K monitors for real time, on set quality checks. Real time hardware scaling creates high-quality HD-SDI and HDMI outputs for viewing on consumer and professional HD monitors, giving you additional options.

RAW SUPPORT

RAW data is the source from which all other image formats can be generated. This is the equivalent of a camera negative in film terms. Thunderbolt allows the bandwidth to record this RAW data via a single cable to a properly configured drive array. Ki Pro Quad supports RAW data pass-through while simultaneously recording to 4K ProRes files, for the ultimate in data security and flexibility. Footage can be captured RAW and in 4K, Quad HD, 2K, and HD resolutions. Captured RAW, it can be transferred RAW to a RAID or computer. Color depth supported is 10-bit 4:4:4 and 10-bit 4:2:2.

In cases of storing to an SSD, the Ki Pro Quad can record in 4K, 2K and HD ProRes formats, which are friendly to Final Cut, Premiere and Avid. Two SSD slots are available.

A diverse set of connections includes SDI, HDMI, balanced audio, Thunderbolt, and Ethernet. A 4-pin XLR port is also available on the bottom of the device.

ONBOARD CONFIDENCE MONITORING

The screen on the Ki Pro Quad is located on the same side as all of the user controls so that both the screen and controls are fully accessible even when the Ki Pro Quad is mounted to the camera along with other gear. This provides a quick reference of the input signal as well as the configuration menus. The current status of the Ki Pro Quad as well as all the configuration information is displayed on the built-in screen. For monitoring, a 4K display and an HD display can be connected by dedicated SDI and HDMI monitor connectors.

The Ki Pro Quad also usefully features a playback-capable display monitor that would allow you to see what you're recording.

SMALL ENOUGH TO MOUNT DIRECTLY ON THE CAMERA

4K cameras are no longer giant pieces of machinery. They are as mobile as an HD camera and need a recording device that matches. Ki Pro Quad has the same side profile as the AJA Ki Pro Mini, so the same mounting accessories such as the Mini Mounting Plate can be used to mount the Ki Pro Quad to cameras, rails or whatever the situation calls for.

KEY FEATURES : AT A GLANCE

MULTI-FUNCTION SOLID STATE RECORDER

- ❖ Captures, records and outputs 4K, Quad HD, 2K, and HD
- ❖ Supports 10-bit 4:4:4 and 10-bit 4:2:2 / Can capture and transfer RAW
- ❖ Records to edit-friendly 4K, 2K, or HD ProRes files on removable SSD media
- ❖ Features SDI, HDMI, Thunderbolt, XLR, Ethernet and balanced audio connections

OUTPUT

- ❖ Real-time transfer of RAW to a RAID or Thunderbolt-enabled computer
- ❖ Uncompressed and debayered output to 2 displays by dedicated SDI / HDMI connectors

DEBAYER PROCESSING

- ❖ Performs debayer processing of RAW (RAW can further be manipulated by software tools)
- ❖ Debayered image is used for 4K monitoring, scaled/cropped HD monitoring, and on-board compressed storage to SSD media.


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DIGITAL CINEMA CAMERA



CANON EOS C-500

The Canon EOS C500 and C500 PL interchangeable-lens models are the high-end 4K/2K Digital Cinema Cameras in Canon's Cinema EOS System for professional filmmakers and cinematographers.

The groundbreaking C500 and C500 PL Digital Cine Cameras fuse Canon's very latest 4K/2K video technologies with its long established lens heritage and the creativity of the EOS System. With both EF mount (C500) and PL mount (C500 PL) interchangeable lens compatibility, the superior image quality of the C500 and C500 PL cameras gives filmmakers the power to tell every story.

WHO ARE THEY FOR?

The EOS C500 and C500 PL Digital Cinema Cameras set a new





quality benchmark in a highly versatile system that will appeal to highly demanding professional filmmakers – from major motion picture directors to documentary makers, television channels to commercial makers, and more.

Sophisticated Canon 4K/2K camera technologies, plus an MPEG-2 MXF 4:2:2 codec, deliver the superior quality imaging performance that's required by filmmakers, broadcasters and post-production houses, whilst multi-camera connectivity provides straightforward integration into studio environments.

The C500 and C500 PL cameras offer an outstanding combination of exceptional imaging performance, compatibility with Canon's Cinema Lens series (in both EF and PL mounts) that delivers 4K optical performance, compact form factor, and extensive customisation options.

KEY FEATURES

- * 8.85 Megapixel Super 35mm Canon CMOS sensor optimised for superior quality 4K-resolution imaging.
- * Compatibility with Canon's wide range of EF lenses (C500).
- * New Cinema Lock EF lens mount (name tbc) for easier lens change-over. Compatible with existing EF lenses.
- * Industry-standard PL lens compatibility (C500 PL).
- * Three built-in ND filters.
- * Compact, modular design.
- * 'Cinema RAW' 4K RAW/HRAW recording modes, recorded to external device.
- * 2K RGB 4:4:4 12-bit and 10-bit, YCC 4:2:2 10-bit modes, recorded to external device.
- * Broadcast-ready 50Mbps MPEG-2 MXF recording to two CF cards.
- * High-sensitivity, low noise performance at up to ISO 20,000.
- * Extensive image customisation including built-in Canon Log Gamma.
- * Robust, splash-resistant body with magnesium alloy components.
- * Seamless workflow integration.



SUPER 35MM FORMAT CMOS SENSOR

The C500 and C500 PL feature a large 8.85 Megapixel (effective) Super 35mm format CMOS sensor for video capture that provides four-channel RGB processing for RAW footage.

The sensor has a pixel size larger than that for conventional professional camcorders enabling greater light-gathering capabilities for superb high-resolution images with enhanced sensitivity, minimal moiré and jaggies, low noise, reduced shutter artefacts, along with typical large sensor benefits such as beautifully shallow depth-of-field.

MULTIPLE RECORDING FORMATS: 4K, 2K AND MXF 4:2:2

The C500 and C500 PL cameras offer a wide selection of recording options with both 4K RAW and 2K RGB 4:4:4 or YCC 4:2:2 recording to external, third party recorders for superior imaging performance. 4K can be recorded as 4K DCI for cinema and QFHD for broadcast.

The cameras also offer the ability to record broadcast-ready MPEG-2 MXF

files at 50Mbps (4:2:2) to two CF memory cards with relay and simultaneous recording options available. In the MXF priority mode pre-recording, relay recording, double slot recording and slow and fast motion can be performed. In the 4K/2K recording modes pre-recording cannot be performed.

The ability to record simultaneously to an external device in 4K or 2K and to CF cards allows for the creation of broadcast specified HD footage and proxy files for use in post-production at the same time.

Depending on the 4K or 2K recording format used slow and fast motion is available in either 1fps or every two frames steps for creative flexibility. For recording to CF cards in the MXF mode the frame rates for the C500, as with the C300, are 1-30fps or 1-25fps at the 1920x1080 resolution and 1-60fps or 1-50fps at the 1280x720 resolution.

WIDESPREAD LENS COMPATIBILITY

The creative possibilities of the EOS C500 and C500 PL Digital Cinema Cameras

are greatly enhanced by their compatibility to Canon's wide range of EF mount lenses (C500) and the industry-standard PL mount lenses (C500 PL).

Canon's extensive EF lens range encompasses over 60 different lenses for a total focal length range that stretches from 8mm up to 800mm to open up an incredibly wide range of shooting possibilities. Filmmakers who are already shooting with industry-standard PL lenses can take advantage of the widespread compatibility of the Cinema EOS System.

The C500 and C500 PL are also compatible with Canon's 4K EF Cinema Lens range that delivers exceptional 4K (4096x2160 pixels), optical performance and offer compatibility with Super 35mm-equivalent sensors.

The C500 model includes a new EF lens mounting system that, via a mount lever, rotates the lens lock and eliminates the need to rotate lenses to attach them to the C500. This allows for swift, secure and easy attaching and detaching of any of Canon's extensive range of over 60 EF





mount lenses, and is especially useful for easy changing of larger lenses that are mounted on rigs.

COMPACT, MODULAR, LIGHTWEIGHT DESIGN

The EOS C500 and C500 PL Digital Cinema Cameras have compact bodies that have a modular design for superb mobility and expandability. A removable handle and multi-angle control panel components ensure maximum manoeuvrability, whilst the robust, splash-resistant body features magnesium alloy components for additional rigidity and toughness.

A 4.0-inch (10.1cm) 1.23 million-dot LCD panel rotates forward and back through 270 degrees with an optimal

position for shoulder-mounted shooting. The panel can also be rotated for monitoring from one side of the camera and allows for easy checking of scene composition at low angles. The cameras have a 0.52-inch (1.3cm), 1.55-million dot viewfinder with a 16:9 ratio.

HIGH SENSITIVITY, LOW NOISE

The C500 and C500 PL feature high-sensitivity and low noise performance. This cuts back on setup times for shooting, reduces lighting equipment costs, and increases the shooting possibilities in low light conditions.

CANON LOG

Extensive image customisation includes built-in Canon Log Gamma, which delivers neutral image quality with wide dynamic range (800%) for maximum freedom in post-production, providing up

to 12 stops of latitude. Canon Log is applied to 8-bit footage, 10-bit 4K RAW data, or the 12-bit log gamma setting for 2K RGB.

An advantage of 10/12-bit log gamma settings, in comparison to the 8-bit log gamma setting, is their ability to reproduce detail in dark areas. At the 10-bit/12-bit log gamma setting much more information is recorded for the dark areas so there is less noise and the dark areas can be expressed in greater detail.

BUILT-IN ND FILTERS

A four-layer built-in ND filter system offers three densities – 2-stop, 4-stop and 6-stop – with ND0 being clear. The filters allow for keeping the iris open for shallow depth-of-field and attractive bokeh in images.

SEAMLESS WORKFLOW INTEGRATION

Straightforward workflow integration is key during Digital Cinema production and is catered for thanks to 4K RAW and 2K RGB workflows that are output directly to a wide variety of



external recorders. Once captured, post production houses will be able to ingest 4K RAW using their normal procedures. A free software package, available via download,

will assist in the processing of 4K footage.

The industry-standard MXF file format within the C500 and C500 PL can record Full HD 4:2:2 files to CF cards and is compatible with most of the major NLE software editing packages.

PERIPHERAL ILLUMINATION CORRECTION

In the C500 a Peripheral illumination correction function automatically compensates the light quantity in the four corners of the screen in accordance with the peripheral light quantity characteristics of a wide range of Canon EF mount lenses.



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PANASONIC AG-HPX-250

The Panasonic AG-HPX250 P2 HD Handheld Camcorder is the first handheld professional camcorder model to record the extremely high-quality AVC-Intra 100 Mb/s (10-bit 4:2:2) codec. Featuring an integrated 22x zoom lens and a 2.2 Mp 1/3"-type 3MOS imager, the versatile HPX250 records not only AVC-Intra but also several flavors of DVCPRO (including DVCPRO HD) as well as DV. A variety of frame rates are possible in DVCPRO modes, for native slow- and fast-motion effects.

For video that will later endure heavy processing in the form of effects and other processes, the intra-frame compression options of the HPX250 are crucial. The AVC-Intra 100 codec is a perfect choice for any projects that involve tasks such as greenscreen shooting. The HPX250 could thrive as the second camcorder on an independent feature production, or as the go-to model for a freelance videographer who does a variety of jobs, from SD to HD – and with support for PAL/NTSC signal systems, it will cross oceans without missing a beat. Its compact size makes it hard to leave at home.

HIGH-SENSITIVITY, HIGH-IMAGE-QUALITY U.L.T. IMAGE SENSOR

The AG-HPX-250 features the progressive compatible U.L.T. (Ultra Luminance Technology) image sensor (1/3-type 2.2-megapixel MOS sensor) that is used in broadcast P2HD camera recorders. This image sensor offers high sensitivity and low noise to enable shooting in low light conditions. In AVC-Intra 100 mode,

they can record high-quality Full-HD images.

21X ZOOM LENS WITH WIDE COVERAGE FROM WIDE-ANGLE TO TELEPHOTO

The AG-HPX250 is equipped with a newly designed, large-diameter zoom lens, with a filter diameter of 72 mm. This 21x (f = 28mm to 588mm, 35mm equivalent) zoom lens covers a wide field of view, from wide-angle to telephoto, without a conversion lens. The lens is provided with three rings -- a mechanical (cam-type) zoom ring, a focus ring and an iris ring -- for the same kind of manual operation that you get with an interchangeable lens.

FULL P2HD IMAGE QUALITY WITH AVC-INTRA CODEC RECORDING

Offered for the first time in a handheld camera recorder, AVC-Intra is a codec based on advanced MPEG-4 AVC/H.264 moving picture compression technology. It uses an intra-frame compression system to achieve high compression, high image quality and high editing performance. You can select AVC-Intra 100 for full 10 bit 4:2:2 full sample recordings with 1980 x 1080 pixels or AVC-Intra 50 for video quality similar to DVCPRO HD and twice the recording time. The AG-HPX250 also offers DVCPRO HD, DVCPRO 50, DVCPRO and DV recording.

HIGH-END OPERATION WITH MULTI-CAMERA SYNCHRONIZING AND VFR RECORDING

- Multi-camera synchronizing: GENLOCK input and TC input/output allow

POPULAR CAMERA

synchronization of multiple cameras. Ideal for multi-camera live relay and recording systems.

- HD SDI/HDMI output: For broadcasting and professional system operation.
- VFR (variable frame rate): Enables film-camera-like image effects with over cranking for slow-motion and under cranking for quick-motion effects. 1080 setting: up to 30p, 720 setting: up to 60p (both at 59.94 Hz).
- HD multi-formats including native 24p. Switching of 59.94 Hz/50 Hz also possible, for use with worldwide HD video formats.

A WIDE RANGE OF FUNCTIONS FOR BROADCASTING AND PRODUCTION WORK

- 4-position (clear, 1/4 ND, 1/16 ND, 1/64 ND) optical neutral density filter wheel.
- XLR 2-channel audio input terminals supporting a 48 V phantom power supply.
- DRS (Dynamic Range Stretch) suppresses blocked shadows and blown highlights.
- Waveform and vectorscope display.
- Selectable gamma settings, such as cine-like gamma, for rich gradation.
- Convenient features and functions include scene file, user buttons and focus assist functions.
- High-resolution, high-brightness viewfinder and LCD monitor.
- Two P2 card slots enable consecutive recording and hot-swapping.
- One-clip rec stores multiple, consecutive cuts into a single file.
- Pre-rec, loop rec, one-shot rec and interval rec capability.
- IEEE 1394 and USB 2.0 (Host/Device) interface.

PANASONIC CAMERAS ARE AVAILABLE WITH:

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PRODUCT LAUNCH

Saurabh Kumar, Music Composer & Sound Recodist, Review The Latest Audio Product

Made for DSLRS

DR-60D: TASCAM:-

TASCAM's award winning DR-60D is the new audio recording solution for on-set filmmakers and videographers using DSLR's. For years, filmmakers have been trying different methods for recording audio, using bulky recorders designed for music and trying to transform the inferior audio technology built-into DSLR's. Now TASCAM has designed an answer that pros and amateurs alike have been waiting for.

The DR-60D is a brand new 4-track solid-state recorder utilizing TASCAM's decades of experience. The recorder utilizes high-grade HDDA pre-amps, legendary AD converters, and a durable but lightweight structure and shape. This device will fit snugly under any camera or into any rig, and record up to 96kHz/24-bit high quality audio straight to SD/SDHC media. Filmmakers have at their disposal two 1/4"-XLR Locking Combo MIC/LINE Inputs, 3.5mm Stereo MIC Input, Camera In, Camera Out, Line Out and Headphone Out. Both 1/4"-XLR Combo Inputs supply +48V Phantom Power and the 3.5mm Input supplies Plug-In Power for microphones requiring a bias voltage.

The DR-60D is incredibly easy to use, employing TASCAM's very popular user interface and external controls for every major operation. The body structure, soft-touch keys and dials are designed

specifically to help eliminate handling noise. The multiple record modes include, 4-Channel Record, Auto Record and TASCAM's Dual Record "Safety Track" Mode make the DR-60D one of the most versatile recorders on the market.

Tascam has been building digital audio recorders for decades There's been no need for massive technical innovation specifically for the DR-60D: Tascam has been building digital audio recorders for decades. What they've done here is cleverly adapt their presentation so that the recorder can be easily and simply integrated into a DSLR rig. The unit has ample 1/4" mounts to make it adaptable to work with virtually any kind of set-up.

With a cascade of pro-audio features (below), we can't wait to try this out. Price? B&H has it listed at \$349.00

- Record to SD/SDHC card (Up to 32GB)
- Simultaneously record up to 4 tracks
- Record Mode : MONO, STEREO, DUAL MONO, DUAL ST, 4CH
- Recording format : 16/24bit, 44.1/48/96kHz (WAV/BWF)
- TASCAM original HDDA microphone preamp
- Recording levels can be adjusted independently for the 1/L, 2/R and 3-4 inputs
- Two XLR/TRS inputs support +4dBu line level input and phantom power supply (24/48V)
- Plug-in power supply and high-output mic input supported on input 3-4
- CAMERA OUT connector for output from the DR-60D's mixer
- CAMERA IN connector for sound monitoring from the Camera
- Independent LINE OUT connector and HEADPHONE output for high-quality sound output
- 50mW/ch headphone output
- Tripod mounting threads (bottom) and DSLR screw attachment (top)
- Handles protect the screen and can be used to attach a shoulder strap
- Soft-Touch Rubber Keys for silent operation
- HOLD switch to prevent accidental operation
- A QUICK button is available for easy access to various functions
- 128x64 pixel LCD with backlight



- USB 2.0 connection for high-speed transferring
- Mini USB cable included
- Operates on 4 AA batteries, an AC adapter (sold separately) or USB bus power
- Can extend battery life with BP-6AA battery pack (sold separately)
- Dedicated remote control jack for the wired RC-10 remote control or RC-3F footswitch (both sold separately)
- Internal mixer: PAN and LEVEL controls
- Low cut filter(40/80/120Hz)
- Limiter (1/L and 2/R can be selected for link-operation)
- Delay function for distance of microphones adjustments (+/- 150ms)
- M-S decode function
- Slate tone generator (AUTO/MANUAL)
- Selectable duration of slate tone from four positions (0.5/1/2/3 sec, when Auto generate)
- Selectable slate tone generate position. 3 positions: OFF/HEAD/HEAD+TAIL, when Auto generate
- File name format can be set to use a user-defined word or date
- Dual recording function allows two files to be recorded simultaneously at different levels
- Auto-record function can automatically start and stop recording at set level
- Pre-recording function allows the unit to record a 2 second sound buffer before recording is activated
- Self timer function for solo recording
- New file starts recording automatically without interruption when maximum file size is reached
- Track incrementing function allows a recording to be split by creating a new file when desired
- Jump back and play function
- Equalizers function for playback, and level alignment function to enhance the perceived overall sound pressure
- Resume function to memorize the playback position before the unit is turned off
- MARK function up to 99 points per audio track
- DIVIDE function

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Feedbacks are welcome at:
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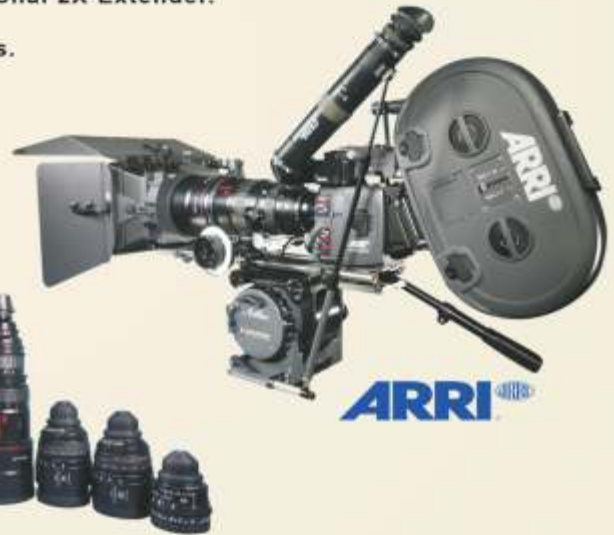
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SONY F-35

" The F35 has been designed as a digital film camera for film production . It records in the LOG (logarithmic curve; a curve that maps the image information in a similar way to a scanned image from a piece of film) format in order to retain as much image information as possible."

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