

Next Club Meeting:
 * **Wednesday August 10th, 7:30 - 9:30 p.m.**
Cupertino Room, Quinlan Center,
10185 N. Stelling Rd., Cupertino, CA



IN THIS ISSUE: AUGUST 2011

Getting The Shot In Low Light

Milt Kostner and assistants demonstrate how to save the shot in poor light conditions.

Pages 1 and 2

Experiences With Low light Shooting

Gordon Peterson has some tips from his nature and travel work shooting after dark videos.

Page 2, 3 and 7

President's Message

We need to find a new Board for 2012, and "Connections" continues with kudos to Frank Swanson.

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VP's Message

Bill Mannion reflects on the power of advertising and how two local newspapers have brought us greater exposure.

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Looking For The Past in Germany

Brian Lucas returns from a trip down memory lane with enough footage and pix to make an epic.

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Tech Tips

Understand how to use depth of field to give your videos that extra polish says Frank Swanson.

Page 6

A Shot In The Dark

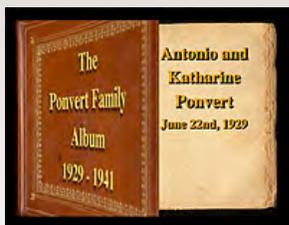
July 2011 Meeting

Highlight

Making Low Light Videos

Workshop with Milt Kostner, assisted by Fred Pfof and Skip Stevens

August 10th Meeting
Making Family History Videos
 by Frank Swanson



The who, what, where, when, why and how to get started making one of these fastest growing and priceless kinds of videos - documenting your family history

By Milt Kostner

There is little magic in getting a good image out of a darkened setting, whether your goal is a contrasted bright image or a threatening dark 'noir' scene. The secret is to understand how to control the amount of light reaching the camera's sensor and the amplification applied to the sensor's signal. In many cases your camera's automatic controls will provide that captured image. But what if you wanted to take actions beyond the general logic built into your camera?



Granted, some cameras (cell phones, iApples, and lower cost point-and-shoots) have little ability to alter what the camera captures. In that case, shoot away and hope for the best. Our suggested steps range the cheapest to those only available on the most costly of prosumer cameras.

Each camera setting is a tool for capturing more light and enhancing the final result. But each change has both good and bad effects. Over the years professional cameramen have developed guides to a preferred order of

making these changes. The purpose of this article is to summarize that path to better shots in the dark.

Let's imagine that after shooting in the bright sunlight, you intend to shoot next in a darkened restaurant corner. Let's say you knew that this would happen. Up front could you have been better prepared? You might have more than one camera. Use the one with the largest lens diameter or the larger sensor. Larger lens lets in more light. If more than one lens is avail-

able, use the one with the lowest f-stop. A cmos sensor has more low light sensitivity than a ccd sensor. A tripod will provide more stability at slower shutter speeds.

Camera / Lens / Setup

Switch all controls to manual, especially auto-gain (auto exposure). You camera settings should be locked in based on



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Shot in Dark cont. from page 1

the outside shots. Switch to manual focus, as in low light your camera may not be able to auto-focus. Remove all filters, especially neutral density filters. Even UV filters cut out some light. Now see what you get. A black monitor? Probably. Remember we were locked in to sunlight settings. We need to go on.



Maximize available lighting

See if you can turn on all 'practical lights' available. A 'practical light' is the lighting normally found

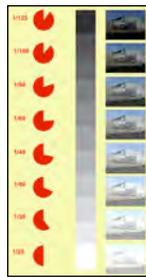
inside all rooms. Side lamps, overhead room lights, bed-lamps. But if they are in the frame, try to relocate them. A light in the frame will upset the overall tonality of the image. The advantage of practical lights is that there is no equipment to haul around. Use streetlights if outside.



Reduce F-stop

Now start dropping your camera's f-stop control, opening the iris so

that more light gets to your camera's sensor. Watch out for your shrinking depth-of-field wherein good focus lies. This is more important where your desired subjects are offset. Back off for necessary focus. Not enough brightness? Proceed onward.



Reduce shutter speed

Reduce your shutter speed increasing the time that more light accumulates on your sensor. Shutter speeds below 1/60th sec. is where your tripod becomes essential. As your shutter

speed slow, motion blur will become more apparent with subject movement, as in a dance. Objects blur with action. Back off to reduce blur. Not enough?

Reduce frame rate

Consider dropping your frame rate. If you normally shoot at 30 fps, consider 24 fps or lower. Lower frame rates generally allow slower shutters. Some cameras, like my Canon HV-30, have auto-slow shutter preset if you insist on shooting in auto mode. But manual shutter setting will match low speeds of this preset. Motion blur is the downside with action.

Add special lighting

Add a camera light or bring along a light kit consisting of external light(s). The drawback is the extra gear you have to haul along and required power. A camera mounted light will flatten your im-



ages and may also generate disturbing shadows. Careful placement of your lights is important to enhance images and prevent unwanted wall reflections. Watch out for clipping due to bright highlights. Use of extra lighting should give you the clips you wanted.

Increase Gain/ISO setting

No lights? In desperation, you'll have to go on to the last step we can offer. Increase the gain/exposure value/ISO setting until you get an image. This is what your less capable cameras will do. ISO is included to cover the originally still cameras that are now moving successfully in to the video scene. So good that Hollywood and TV are using the video capable DSLR's in greater number. Their advantage is lower cost (than professional video cameras) and better low light sensitivity.

But amplifying image brightness as above results in one drawback - more luminosity and color noise. Low noise images normally marks the better video maker, unless a blurred scene is desired.

So the step are: **Camera/Lens/Setup, Maximize available lighting, Reduce F-stop, Reduce shutter speed, Reduce frame rate, Add special lighting, Increase Gain/ISO setting.**

Let's go shooting! ■

There have been several times in my video experience when knowing how to handle low light situations have allowed me to get the shot when it could have been just black. In Australia and New Zealand I encountered wildlife exhibits that had very dim light so that the nocturnal animals could be observed. In Thailand and India many of the beautiful Buddhist shrines are in dimly lit caves. Some of my more interesting cave experiences in Carlsbad Caverns, New Mexico, and Leman's Cave on the boarder of Utah and Nevada along Highway 50. Evening and night bird watching for owls and other creatures active at night have been in very low light. Then there are the spectacular fireworks displays.

My Experience With Low Light Videography

By Gordon Peterson

Even lowly lit stage settings. The videographer can encounter so many low light situations.

Planning for low light photography needs to start with the selection of the camcorder. One wants to keep the initial cost low yet have the best features possible. I suggest that you look for the low light capability of the camcorder, usually given as "lux [lx]" (which can be thought of as the lowest detectable light by the eye. A typical eye would just know there was light at 1 lux. A camcorder that has a

low light minimum of less than one-lux is a very good camcorder for low light use. Most of the consumer camcorders give a minimum lux of around 5.

My \$2500 Canon GL2 lists it's minimum light as 0.37 lux at 1/8 second (slow shutter). You can see what it took at the club low light meeting by checking out the DVD I made for the program. My \$300 Panasonic PV-DV52 lists it's minimum light as 5 lux at (F1:1.8 [lens setting with auto iris control]). Newer camcorders have more sensitive light detection (although high



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PRESIDENT'S MESSAGE



"Connections"

It is that time of the year when we start looking for our leaders for the next year and we have openings for President, Vice President and Secretary. Frank Swanson has indicated his willingness to continue as Treasurer. I had hoped that there would be a volunteer group of club members to form a nomination committee for next year's officers, but there were none at our July meeting. I had hoped that club members would respond to the need for nominations having experienced the decline of the San Jose Movie/Video Makers club when no one would serve as President for the then active group of more than 20 members. The lack of a full slate of officers almost happened to the Viewfinders in passed years so I hope that is not the case for the coming year. The need for officers is an essential aspect of the club. Every

member should consider the necessity of possibly being an officer for the coming year. The club needs your support! Someone else may not do it for your benefit. It is time for you to have a turn.

Milt Kostner and his assistants Fred Pfost and Skip Stevens, along with volunteer models Bernie Wood and Bob Meacham, provided an interesting and informative program about low light videography. It was evident that a lot of thought and preparation had been put into the program. We should all be better able to take advantage of low light situations in the future.

I'm looking forward to the August 10th program about making Family History Videos produced by Frank Swanson. This is a category of video production that can capture important family information for current and future family members. Some of the events may even have local, state and national importance. As a youth I always wanted to have my elders tell me about the "olden days". Now I find that I have the same requests from the young and even the older members of my family. I think that written memories are valuable, but so much more can be given through hearing and seeing the individuals who lived the experiences. Captur-

ing such histories is to me an important art.

My "connection" for this month is Frank Swanson. I believe that Frank was the Viewfinder's President when I first joined the Viewfinders. He has served for several years as a Board Member in various positions. His current service as Treasurer and web master is of considerable value to our club. He also made arrangements for the club's use of the facilities at the Quinlan Center. I have certainly valued his assistance when I have encountered problems with my video editing and DVD production. His superior technical knowledge and experience has helped me find problems with DVDs and provided advice about videoing and editing. I think that his contribution of the "Tech Tips" article and workshops in our newsletter and at almost every monthly meeting has provided a lot of great information about video production. His skill is evident in his video productions shown at the club and he is always a great competitor in our club competitions. His editing skill has been evident in several of the movie productions of the club. I have benefited greatly from my connection with him and appreciate his support of the club this year and over the past years.

Gordon Peterson

Low Light Experiences from page 2

definition camcorders require more light).

Everything makes a difference for very low light videography. The settings used for shutter speed (note slower speed may give a smear to the video, but you have an image), iris (lens opening: 2=large opening [less sharp image & less depth of focus]) & 22=small opening [sharper image & more depth of focus]), gain (amount of electronic boost to the video signal. More "+" may appear grainy. Less "-" will appear darker), ISO (light sensitivity setting. Settings above 800 may appear grainy), type of light sensing (CCD, CMOS, etc.), quality of the lens and even the type of light or energy the camcorder can capture (infrared, heat for example). If you want color

more light is required than if all you want is the "image", then infrared or thermal settings may produce what you want if your camcorder has the capability.

I recommend that you find out what your camcorder offers in its automatic settings. My Sony 550 Digital 8 camcorder offers low light and super low light and infrared settings. If your camcorder offers a TV screen setting give it a try in low light (the shutter speed has been lowered). It is a good idea to try it out in some low light situations before you have to deal with them. I have almost always use the automatic settings because there was not time to make the manual settings and get the shot.

It is a good idea to have some way to put more light on the subject too.

Having a camcorder light can be very helpful, but remember it will take a lot of battery power if it is using your camcorder battery. Have extra batteries if you have an independently powered light. I have found that having a flashlight held along side the camcorder can help a lot. Of course if you have access to power there are more possibilities, but most of my experience has been on location where I had to have my own battery powered light sources or do the best I could with the light that was there.

If you use other light sources that your camcorder does not automatically adjust for then remember to adjust your white balance manually. It is also good practice to have a white something (shirt, tablecloth,

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V.P.'s MESSAGE



Perspectives 8

"It pays to advertise" as the saying goes. Thanks to a comprehensive article about the Viewfinders Digital Video Club in the "Cupertino Courier" by Cathy Fitzpatrick-Platt, we



had three readers of that article come to our July meeting, Stephen Gross (who also brought his daughter Alexa), Antony King, and Lulu Lai, all residents of Cupertino. The same article was published in the "Sunnyvale Sun" on 22 July and we are counting on it attracting several visitors to our meeting on 10 August.

Frank Swanson brought several copies of the "Cupertino Courier" to the July meeting for distribution to members who don't live in Cupertino so they could read the article. In addition, the article was made available on the Club website. I asked the attending members to take copies of the newspaper home and be sure to pass along the article to friends and neighbors to read and learn all about the Viewfinders.

As mentioned in an earlier Perspective VP column in this Newsletter, the other routine publicity that we place in the "Cupertino Scene" monthly magazine, the "Cupertino Patch" and "Cupertino Courier" Events Calendars and on cablecast TV via KMVT Channel 15 in Mountain View, Los Altos, and Cupertino are real hit and miss propositions as far as motivating visitors to come to our meeting. We

should certainly maintain these venues even though the results are problematic.

But there's no getting away from the impact of an article like the one Cathy wrote about our Club. As you read through the article, you begin to appreciate the fact that Cathy invested much time attending several of our meetings and thoroughly interviewing several Club members to be able to quote their comments about the Club and why they are members. Unfortunately, it is unlikely that we can get this kind of exposure for our Club on a regular basis.

However, there is a way to achieve exposure beyond the routine publicity mentioned above. And that is by all of our members becoming EVANGELISTS (persons with enthusiasm for a cause) for the Viewfinders growth and continuity. Let me count the ways you could spread the word:

- Other Clubs that you belong to
- Neighbors and friends
- Relatives, especially younger members
- Senior Centers you belong to
- Any community media you can make input to

I leave it to you to suggest other ways to inform the community of the Viewfinder Club and its activities. Of course the first step is to decide that you want to be an EVANGELIST for your Club.

On another note, at the July meeting Gordon Peterson asked if there were any members in the audience who would volunteer for the Nominating Committee for the upcoming November election of 2012 Officers. No one volunteered so I am extending the offer via this column to all those members who were not at the July meeting.

There is an old ad for Volkswagen cars that read, "On the highway of life there are passengers and drivers...drivers wanted". Our Club needs some DRIVERS.

Specifically, we need drivers (read members) willing to be nominated for the Offices of President, Vice President and Secretary in 2012. These might seem like daunting roles to take on for someone who has never thought of serving on the Board of the Viewfinders Club.

This is not the case because others before have served as Officers without having prior experience in running our Club. They learned on the job and were mentored by the previous Office holders. What they brought to the role were new ideas and energy.

Think about becoming a Driver and let President Gordon Peterson know of your interest. The vitality and excitement of any Club comes from the input made by Club members.

BECOME A DRIVER TODAY!!

Bill Mannion

TREASURER'S REPORT FOR JULY 2011

Bank Account Beginning 07/01/11	\$1489.13
Income Subtotal:	\$0.00
Expenses Subtotal:	\$38.50
SCCA 2011 Dues	\$28.50
AMPS 2011 Dues	\$10.00
Bank Account Ending 7/31/11	\$1450.63



BECOME A VIEWFINDERS CLUB MEMBER

The pro-rated yearly membership dues are only \$14 for individuals, \$17 for families and \$5 for full-time students. Bring your check (made payable to "Frank Swanson" with memo to "Viewfinders Club Dues") or cash to our August 10th meeting. See our club website Home Page to download our membership application form.

Frank Swanson

TECH TIPS

SHOOTING TIPS FOR THE AMATEUR VIDEOGRAPHER: Part 12
by Frank Swanson

Controlling Depth of Field

Just about every movie and TV show contains some shots that exhibit this visually pleasing photography effect (sometimes called depth of focus) where the subject is in sharp focus and the background/foreground is out of focus. It's also frequently used when two subjects are in the same frame such as two people talking to each other. When the conversation goes back and forth between them so does the focus.

1. Definition of Depth of Field:

Depth of Field refers to the range of distance that appears acceptably sharp. It varies depending on camera type, aperture and focusing distance, although screen size and viewing distance can also influence our per-



ception of depth of field. The depth of field does not abruptly change from sharp to unsharp, but instead occurs as a gradual transition. In fact, everything immediately in front of or in back of the focusing distance begins to lose sharpness — even if this is not perceived by our eyes or by the resolution of the camera. Depth of field involves elements in front of or behind that main subject in the frame. In all but the rarest of circumstances, the main subject in a shot should be sharply in focus. Depth of field is an aspect of videography that must be done right when shooting. It is very difficult, if not impossible, to change in post-production editing.

2. *Kinds of Depth of Field:* There are two kinds of depth of field where examples illustrate the difference:

1. *Deep depth of field:* in a landscape shot of a mountain range where several mountains and even the clouds



in the sky are all relatively sharp even though some elements are miles behind others, 2. *Shallow depth of field:* in a wedding video close-up where the bride is in focus, but the background is fuzzy even though it's a mere few feet behind her.



Now, let's get down to details on how you can control the depth of field with your camcorder. There are two main factors that determine the depth of field: aperture setting and focal distance.

3. *Aperture Setting:* The aperture — sometimes called the "iris" — refers to the opening in your lens that allows light in to strike your camcorder's CCD, and the setting refers to the size of the opening. Larger apertures (small F-stop number) and closer focusing distances produce a shallower depth of field. So, an aperture setting of 8.0 is more closed than an aperture of 2.0. Closing the aperture not only deepens the depth of field, but also darkens the exposure. Opening the aperture not only shallows the depth of field, but also lightens the exposure. So, reducing the size of the aperture will often require that you compensate using other variables to get a good exposure, such as setting a slower shutter speed or boosting the gain. Making these two compensating changes, however, also affects the image quality.



4. *Shutter Speed:* The shutter speed is how much time per frame the camera's shutter remains open. Slowing the shutter speed not only brightens the image but can also blur it, especially if you are shooting anything in motion like runners on a path or birds in the air.



Conversely, raising the shutter speed not only darkens the image but can also make slower movements (such as someone talking or walking) jittery, as if they were under a strobe light. If you are recording a skier coming down the hill and passing through the frame of your fixed-

position camera, you have to use a fast shutter speed. But the image may look dark, so then you need to compensate by opening the aperture and/or raising the gain.



If you want to record a fast moving but fairly close object such as a boy on a bicycle and can frame your subject moving by, try doing these two things: 1) select a fast

shutter speed to capture the sharpest picture you can, and 2) pan the camera with the subject. The object of the exercise here is to render the subject sharply and blur the background — hence a neat trick to get an artificial depth of focus.

5. *Gain:* With your camera's gain set to zero (the factory setting), the image quality is at maximum. Boosting the gain increases the camera's sensitivity to light, making the exposure brighter but at the cost of introducing grain or noise into the image. The more the gain is boosted, the noisier the image will be. There are other techniques to reduce the brightness when opening the ap-

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Tech Tips cont. from page 6

erture to get a shallow depth of field: use of a neutral density filter, which will change the light entering the



camera, kind of like sunglasses. Neutral-density [ND] filters affect the image quality less than aperture, shutter speed or gain and are particularly useful in a bright setting to give you more wiggle room to balance the other variables for getting

the depth of field and exposure that you want.

6. Distance to Subject: Much like lens strength, the subject's distance plays a big part in determining the possible size of depth of field. The closer you are to your focal point, or subject, the

less depth of field is possible. To illustrate this



effect, hold your hand at arm's length in front of your face. Even when focusing on your hand you can probably see a good bit of the surrounding environment in reasonably clear focus. Slowly move your hand towards your face until you reach the halfway point. Notice how much less of the area surrounding your hand is in focus. Continue moving your hand towards your face until it is as close as your eyes can focus on it. Very little of the area surrounding your hand can now be seen. The same effect occurs with your camera lens. This effect, combined with high magnification factors such as zooming in on a subject from a far distance, results in a tiny depth of field.

7. The Controlling Process: Because the variables controlling depth of field and exposure are inextricably related, you sometimes have to make

compromises. The process to get depth of field is a balancing act. First, choose your composition (framing and distance) and an appropriate aperture setting (more open for people and close-ups; more closed for landscapes and action shots). Next, if the shot is over-exposed, use one or more ND filters to cut the light's intensity rather than increasing the shutter speed. On the other hand, if the shot is under-exposed, slow the shutter speed or boost the gain to try to get a good exposure. If you can't get a good exposure with that aperture setting, and, thus, depth of field, you may have to compromise a bit since a good exposure is usually more important than the perfect depth of field. Bear in mind, however, that exposure can be tweaked in post-production, whereas depth of field is tough, if not impossible, to alter. As with many facets of videography, experience is the best teacher, so some practice in different settings will help you fully grasp how these variables work together. Camerawork is all about creativity. Everything you do with your camera communicates something to the viewer, whether you realize it or not. When watching videos on TV or movies in the theatre, take note and appreciate just what a powerful device depth of field can be.

So, there you have it, a few tips on how to get some depth of field into your next movie. Use it to emphasize the subject while de-emphasizing the foreground and background. This visual effect draws your audience to the subject, provides visual variety and new perspectives to your photography, and demonstrates that you've moved up on the skills as a videographer. ■

Low Light Experiences from page 3

rock, wall, etc.) in the shot so you can use it to white balance the video in post processing. I usually carry a white piece of paper to place in the shot at the beginning to use in the post processing of that section of video. I have also used the white paper to white balance my camcorder in the cave lights to get the beautiful colors inside the cave. I find it preferable to manually white balance on location whenever I can than to try to do it in postproduction.

My birding videography has challenged my low light skills to get video of owls and other birds and creatures of the night. On of the best camcorders I ever used was the Sony Digital 8 series with both low light settings and infrared capabilities which works in almost no light or in no light with an infrared light. Starlight was enough with the infrared setting. Moonlight was very good.

Be prepared for low light to improve your video work. ■

2011 AMPS Amateur Video Competitions Now Open

AIFVF (American International Film & Video Festival) and NAMMA (North America Movie Making Awards) for American and Canadian entrants only. Includes automatic entry into AIFVF contest. Contests are for not-for-profit productions only

Details at www.ampsvideo.com

CLUB MEETINGS REFRESHMENTS VOLUNTEERS

The club thanks JoAnn Pfost for recruiting the members below who will provide refreshments and those that will and have done so this year.

July 13th	Jim Gorman	October 12th	Scott McLaughlin & Glenn Mooty
August 10th	Jerry Oliver & William Loden	November 9th	Janet Holl & Gordon Peterson
September 13th	Betty Pickett & Sal Tufo	No December meeting	

CREDITS

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Viewfinder Newsletter is published during the fourth week of each month for Viewfinders Digital Video Club of Cupertino members.

Please send announcements and articles for submission to the publisher during the two weeks previous to the following monthly issue. Send address and email corrections to the publisher.

MONTHLY CLUB MEETINGS

Held in the Cupertino Room, Quinlan Center. 10185 N. Stelling Road, Cupertino, California. Watch the calendar for programs updates. Guest admission is free.

MEMBERSHIP DUES

- \$30 for individuals
- \$35 for families
- \$5 for full-time students

OFFICERS

President: Gordon Peterson
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Secretary: Fred Pfost
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www.viewfindersclub.org

Jumble Puzzle answers from Page 5

Jumbles:

NAGGING WATCH
 CLOAK TOAST

Answer:

What the Video Productions Group is doing here on the set of "Through the Dark Glass":

TAKING A "WAGON" SHOT

CLUB MEETING EVENTS
2011

<p>January 12th, Wednesday</p> <p><i>Videomaking Made Easy with the Canon SD 4500</i> by Jonathan Parnell of Keeble and Shuchat</p> <p>Tech-Tips: <i>Framing the Shot</i></p>	<p>February 17th, Thursday</p> <p><i>Award Winning Amateur Movies:</i> by Frank Swanson. Screening of movies from SCCA, AMPS and AIFVF contests in 2010</p>
<p>March 9th, Wednesday</p> <p><i>Using Still Images Creatively in Videos:</i> how and why the video editor should employ The Ken Burns Effect by Brian Lucas</p>	<p>April 13th, Wednesday</p> <p><i>Making Animation Videos:</i> with Michael Humphress of "KrazyTalk Animator"</p>
<p>May 11th, Wednesday</p> <p><i>Nimitz Grade School Movies:</i> screened and presented by teacher Susan Woods and Apple employee and editor Peter</p>	<p>June 8th, Wednesday</p> <p><i>Member Video Screenings:</i> recently produced movies by club members are shown to help Club members improve the quality of their productions</p>
<p>July 13th, Wednesday</p> <p><i>Making Low Light Videos:</i> basic rules and procedures for improving your low light video shooting and editing</p>	<p>August 10th, Wednesday</p> <p><i>Making Family History Videos:</i> what, why, how and when to get started in documenting your family history</p> <p>Tech-Tips if time allows</p>
<p>September 13th, Tuesday</p> <p><i>Independent Movie Maker Presentation</i></p> <p>Tech-Tips if time allows</p>	<p>October 12th, Wednesday</p> <p><i>Annual Member Video Contest:</i> screening of best movies produced by Club members this year</p> <p>Tech-Tips if time allows</p>
<p>November 9th, Wednesday</p> <p><i>Golden DVD Awards Night:</i> screening of the top three movies for the year; also election of Club officers for 2012</p>	<p>DECEMBER</p> <p>No meeting this month</p>