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

viewfinders

IN THIS ISSUE: MAY 2012

April 2012 Meeting

Highlights

Software for Improving Audio Quality

Audio   Sweetening/Fixing

By Chet Davis

*Continuing our concentration on sound quality for video after last month's presentation by Dana Marks on narration, in April we took a look at audio clean up. In a program produced by **Bob Meacham** we were privileged to be addressed by **Chet Davis**, an expert in all aspects of video production, on software applications that can do the job.*

Wednesday May 9th Meeting

Nimitz Grade School Movies

As they have done for several years now, the children and their teacher Miss Woods return again this year to show us what these elementary kids can think up with a camcorder and iMovie.

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*Chet studied at San Jose State, earning a B.A. Degree in Radio and TV Broadcasting before spending 17 classroom years teaching. He now concentrates on his online instruction service and provides webinars and tutorials for video practitioners. Viewfinders members should visit his website at **www.yourvideoexpert.com** to see what he has to offer.*

FINDING SIMPLE SOLUTIONS FOR FIXING BAD SOUND

As Chet pointed out, people are much more forgiving of bad video than they are of bad sound so we need to pay attention to our poor quality audio recordings. Fortunately there are computer programs avail-

able that can assist us in this and Chet's presentation examined three of them. Chet's purpose was not to get into the deeper art of sound manipulation but to find simple solutions to deal with common audio recording problems.   The techniques covered were: Equalization, Normalization and Noise Reduction. "Noise", in this sense and for the purpose of this article means undesirable sounds such as rumbles, clicks, room resonance and unwanted ambient sounds, etc.

The software applications examined included two freeware programs, *Levelator* and *Audacity,* and the reasonably priced *SoundSoap 2.*

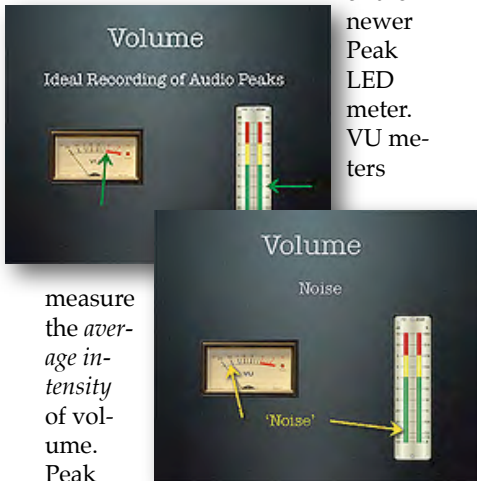But before we begin cleaning up sound we first need to record it, so

Chet began with how to capture good…

VOLUME
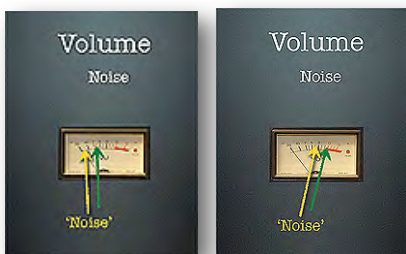
Recording equipment will usually have one of two sound volume meters. Either the older style VU meter or the newer Peak LED meter. VU meters

measure the *average intensity* of volume. Peak LED meters measure the frequency *peaks*, both high and low, of the recording. Both meters show a red area which indicates a sound range beyond the acceptable threshold of the equipment and, if the needle enters it, will likely cause sound distortion. That is to say, too much audio is bad.

However, too low a recording is also bad. Inherent in all equipment is a certain amount of random noise. Re-

cording at a low level to avoid the meter's red area and then increasing volume at play-back will exaggerate this "noise". One needs space between random noise and a desired recording level.

NOISE

"Noise" is all around us so keeping a microphone close to the source of the sound we wish to capture creates a

space between that and "noise". Moving the microphone away from the source narrows the space making "noise" more apparent in play-back.

RECORDING THE HUMAN VOICE

The frequency range of the human voice is fairly narrow compared to, say, musical instruments. The full human voice range is from about 85 hertz at the low end to about 1100 hertz at the upper end but for most of us our voices record somewhere about 400 hertz. Some sound editors, including *Audacity*, provide tools to manipulate the frequencies of a voice recording to both improve speech and remove or lessen unwanted sounds interfering with it.

SOUND EDITOR PROGRAMS

The Levelator

This free-to-download application is the simplest of the three. It's only purpose is to "Normalize" sound. That is, it balances out the extreme peaks of a recording by bringing down loud peaks and increasing

quiet passages. For example, a documentary movie may contain clips from a variety of sources who's volumes may differ greatly. The Levelator will analyze, then "normalize" them to bring them to a common sound level. It has a very simply drop-and-drag interface but can handle WAV and AIFF files only.

SoundSoap 2

SoundSoap 2 is priced at about $100. More professional versions with more features are available at higher cost. This program sits somewhere between the other two. It is not as powerful as Audacity but has a much

friendlier interface. Many of its tasks are automated which will please the casual user and requires no head scratching learning curve. The program's primary functions are to remove "noise" and improve overall audio, With only about a dozen knobs, buttons and sliders the program will remove hiss, rumble, room noise, electrical equipment hum, and other unwanted sound. A window in the interface displays "Noise" removal when the program is activated. Although more user friendly than a full-blown audio editor, a user will still need to consult the user's manual to get the most from some of the controls. A nice feature is a window that displays a video file to allow the user to monitor video footage while adjusting it's audio. SoundSoap 2 is compatible with most audio files but not MPEG-1 or MPEG-2

Audacity

This free-to-download open source program is the most powerful of the three. It is being continually improved and made more feature rich by enthusiastic sound geeks and has a huge following on the Internet. Being the most professional of the applications featured in this article and having a more typical sound editor interface it comes with a steeper learning curve than the other two. However, the tools for cleaning up sound for the videographer are not difficult to use once one learns which of the many tools Audacity has to offer.

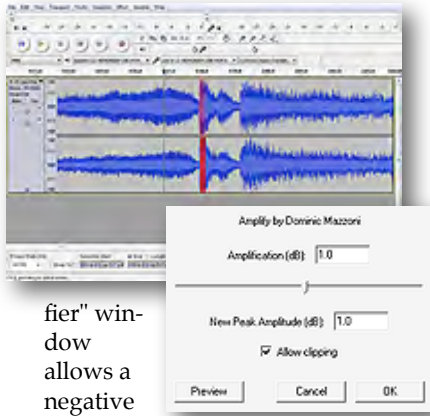**"Normalizing", or reducing extreme audio peaks, in Audacity**

Chet demonstrated by clicking on "Show Clipping" under "View" on the program's drop down menu. This highlighted the extreme peaks of the demo recording. From there he went

Audio Sweetening/Fixing, from page 2

to "Amplify" under the "Effect" menu. This may seem counter-intuitive as we want to reduce the peaks, not make them louder, but the "Ampli-

fier" window allows a negative decibel number. Chet selected -3 decibels which was about right for the sound demo's extreme peaks.
(A note of caution: using "Amplify" to increase the volume of quiet passages will also bring up the inherent "noise" of the recording equipment, so use with care.)

Noise removal with Audacity

Chet's demo recording was made while walking through an alleyway. At times he was silent and at times he spoke, sometime softly and sometime loudly. "Noise" was very apparent in the silent passages and when he spoke quietly with the microphone further away from his mouth. In Audacity Chet opened the "Noise Removal" window under "Effect" and selected a sample of a non-speaking passage. Audacity then analyzed the passage to produce a sound profile. It will then make a recommendation as
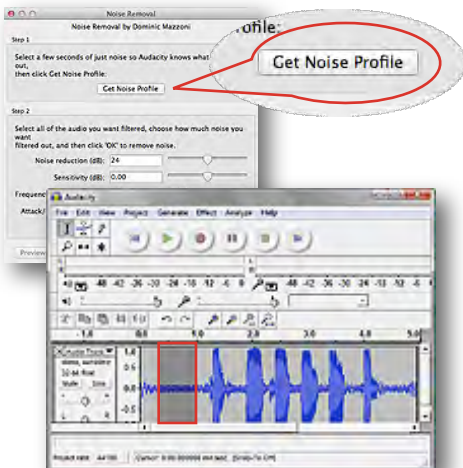
to how much noise reduction to employ, but also provides controls for the user to tweak the recommendation. The noise profile is then employed to remove noise from the entire sound track which results in a far cleaner recording.

Equalization in Audacity

The program does have a "Levelator" style tool built in
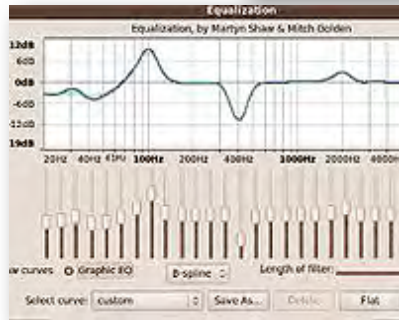
and called "Leveler" under the "Effect" menu but one can go much further if one chooses. By manipulating the sliders in the Graphic Equalizer, one can customize the frequencies, both high and low, to suit one's taste. Chet demonstrated this but it is likely to take time and many fine adjustments, so for most of us that are not experts at sound manipulation the "Leveler" tool will do fine.

Chet finished his presentation answering questions from members and offered his email address: **chet@yourvideoexpert.net** for those looking for more advice on all aspects of videography.

So, depending whether one wants a simple solution to cleaning up one's audio tracks, or is willing to explore the sophistication of a more professional audio editor, Chet provided demonstrations of three applications, at least one of which should address one's comfort level of sound editing and improve one's future audio tracks. ■

Viewfinders Web Site
viewfindersclub.org

Latest Updates

Meetings Page: Watch John Dietrich's Gold DVD honorable mention movie *"The Pick-Up"*. Download the short video loop *"Baseball"*.
View **Chet Davis**'s April presentation on "Audio Clean-Ups".

Productions Page: Click on past club video production titles to view excerpts.

Newsletter Page: Download all Viewfinders Newsletters since January 2007 with a list of selected articles.

Webmaster: **Frank Swanson**

April Members Videos Screened

"*Half Dome Hiking Adventure*" by **Craig VonWaaden**

"Green Screen Workshop" by **Milt Kostner**

"Vietnam and Cupertino Memorial Park" by **Gordon Peterson**

PRESIDENT'S MESSAGE

One Million Years of DNA

If you look at petroglyphs from a million years ago you will see many scenes that are a single image depicting something that was important to the people at that time. Every once in a while you find one where the "artist" tried to capture more of the story by showing multiple steps in the images. As videographers I think these "artists" were our ancestors. They were not satisfied with just a single snapshot or image but wanted to convey more, frame by frame.

Recently I was listening to an expert on DNA and he was asked, "How does the Neanderthal differ from today's humans?" His reply was that of all of the millions of DNA markers modern man only differs in less than 1,000, so in other words, we are our ancient ancestors!

What this tells me is that we, as individuals, are drawn to creating videos to help satisfy that century's old DNA marker. You do this because it is a part of you. And with that in mind, I want to encourage each of you to nurture that artist in you. Take the initiative to fulfill that age old drive and get out shooting, editing and creating some modern day petroglyphs (displayed across your TV screen).

Of course, all of this started to come to me on a recent trip to the Southwest. One of the reoccurring topics in Nevada, Arizona and Utah are the signs left by ancient Indians in the canyons, cliffs and dwellings scattered throughout the areas. Now, I am not abdicating that you start tagging the hills or your house but recording and sharing what our lives are all about is a part of this process. It can be crude or slick, but it needs to be recorded and shared. Do plan on making a couple of videos during the course of the year and sharing your own personal petroglyphs with us at meetings.

Our May meeting program will feature a few of the videos from the kids in Ms. Woods class at Nimitz School. As mentioned before, several of our members have been helping to give these kids a better understanding of how to do videos. Soon I will be reviewing them to select the ones to "premiere" at our meeting. I am looking forward to a successful program and know that each of you will support and appreciate all of the efforts these kids (and Ms. Woods) are putting into their projects. Come and enjoy the show.

We are still filling a couple of the monthly programs and if you have an idea, or know someone that can do a good, interesting presentation, let me know. I will follow up with them and see if we can get them in this year. See you all at the meeting!

Bob Meacham

Richard Pugh, 1933-2012

This past April 15th the Viewfinders Club lost a longtime member, Richard Pugh, 78. Richard Pugh was one of the founding members of the Viewfinders Club back in 1997 when the group met in the Card Room of the old Cupertino Senior Center to watch VHS videos on a small television at the front of the room.

He was a prolific maker of videos of his two grandsons as they grew up. Richard was our first Club member to focus his videography work on family history. He was elected our Club President for 2000 and presided over our first Club meeting at the Quinlan Community Center where we now meet. It was during his tenure that the Club newsletter began distribution via E-mail by Editor Skip Stevens. Later in 2000 along with Club members Bernie Wood, Skip Stevens, Fred Pfost and Bill Mannion, Richard helped conduct the Club's first and only formal class at De Anza College titled "*The A, B, C's of Videography*". By the end of 2000 Richard developed the Club's first website which he diligently maintained every month with new and fresh material.

To enhance the Club newsletters Richard started writing the President's "*As I See It …*" article which appeared every month beginning in mid-2000. In 2001 he became our Club Secretary, and early that year he expanded his videography work by becoming a Public Access Producer for Cupertino Community Channel 15, producing weekly half-hour shows titled "*Never Give Up*" based upon the Sunday messages at his Queen of Apostles parish in San Jose.

Richard did all of his video editing with Adobe Premiere on an Apple Power Macintosh G3 in collaboration with several other Club members including Ernie Piini, Ed Nunes and Bill Mannion who assisted in the tapings. He continued to screen his family videos, participate in Club activities and work on the Club website until he moved to Roseville in early 2006 following the death of Caroline, his wife of 47 years. Our Club is indebted to the contributions and innovations that Richard made for the Club over his nine years with us. He will always be remembered by those who knew and worked alongside him as a Viewfinders Club member.

Frank Swanson

What's New at NAB?

By Bob Meacham

4 ½ days, 10.5 Million square feet, 1,600 vendors and 92,000 visitors. What do all of these numbers have in common? Those are the numbers from this year's NAB (National Association of Broadcasters) Convention in Las Vegas. Each year at this convention the hardware, software and big players in broadcast television, radio, movie and independent production companies come together to show off their new products and sell them to TV networks, stations, movie companies and independent video makers. It covers everything from the camera (and associated equipment) to the broadcast link, to the distributor to the local stations to the television we all watch it on. Every equipment aspect of radio, television, films and editing are covered.

More to the interest of amateurs like you and I are the camera, lighting, microphone, software and publication items that are the state of the art for the coming year. It is a one-stop place to see what is new and where the video world is headed. Of course, this would all be made much nicer if we had say, $100k to throw around on things like high end video cameras, jibs, computer controlled sliders, steady cams, lighting packages, tripods, top of the line microphones, personal camera drones for aerial shots (yes, they were there, $6k-$10K) and the state of the art high end editing software (hey, great deal, AutoDesk just reduced the cost of its Smoke editing software from $13k to $3.5k, and that is just one piece of their suite of editing tools). But since I did not have that kind of money to shop with I walked around and visited the booths to get a better idea of what the industry is doing and where it is going.

What I did learn is that the industry which had touted HD, Super HD, Ultra HD, 3D and "Improved" 3D over the past few years is no longer trying to get us to buy bigger and higher definition TVs but is focusing on two primary areas. One is the world is going to streaming and all products are focusing on how to squeeze, compress, transmit, receive and process all these high end HD signals to get to the consumer a better quality image. So, a lot of effort this year seems to have been done in this area and it starts with cameras. All the new cameras (HD only, SD Video is now history except for those with these cameras) are coming out with higher, faster compression systems to capture the images from larger sensor chips and providing an improvement in the image quality. And the other big push, of interest to those of us amateurs (below the poverty line for pro-sumer video cameras), is that still cameras, DSLRs, shooting high end video are becoming the standard for everything from casual shooting to semi-pro production outfits. Almost every camera maker there; Canon, Panasonic, Sony, JVC, Ikegami and Red One offered some form of a still camera.

One area that was of note is that the editing software companies have decided to make more features available on fewer variations of their products. They are streamlining their suites, combining more tools into the products, so that you can now do things like a wider range of audio editing and more special effects in your basic video editor software. Most of what you and I might want to produce a good video edit can now be found in one software tool, leaving the specialty tools for those that want to do more.

There was more than enough equipment booths, video editing demonstrations and product presentations to fill all 4 ½ days if you could cover the ground. After the second day one starts to choose what one sees by: 1) do they have seating to get off your feet (show floor is open from 9am to 6pm, casinos open all night) and 2) are their chairs comfortable (some were very and some not very). As John mentioned in his article last year, if you get the opportunity to attend at least once, it is very enlightening, can be very informative and an experience you will not soon forget (age being factored in, of course). All of this without even mentioning the wide world of things that can get done and experienced in Las Vegas while attending the trade show. That I will save for another article some day…. ■

TECH TIPS

SHOOTING TIPS FOR THE AMATEUR VIDEOGRAPHER: Part 20
by Frank Swanson

Audible Sound Recording

It has often been said, "Sound is fifty percent of the movie-going experience", some even say upwards of seventy percent! And this is not just because it helps the big box stores sell home theater systems. Sound is equally important for you, the video producer, to pay attention to when you go out on a shoot. On the Internet, the small size and resolution of the visuals you get with YouTube makes sound somewhat forgiving, as you don't expect much. But on your large flat TV screen at home the sound has to be as good, if not better, than the large picture. More often than not, great sound with average visuals provides a better experience for your audience than great visuals with poor sound. And, poor sound is an instant giveaway of an amateur at work. What, then, are some practical tips to help get you started producing the best-quality sound for your videos?

1. Forget About Your Camcorder's Onboard Mic: Most, if not all, consumer-grade camcorders can generate decent-enough images for your movies. This is particularly true if you mount your camera on a tripod and plan the camera moves carefully. But, as for sound, camcorder mics often leave something to be desired. Most of these mics are fine, but it's their placement on the camera, not near the sound source, that is the issue. We're going to take a look at some ways to get great sound when there is a speaking person involved in the shot.

If your camcorder has a built-in mic jack, by all means you should use it – anything that gets the mic closer to the subject and away from the whirring machine noise of the camera or other

nearby non-relevant sounds is a good thing. In general, the closer the mic is to the talent's mouth, the better the sound will be. A lavaliere, for example, clipped to a shirt, jacket or tie, is probably the best solution. And, a wireless lavaliere system is much much better than a hard-wired lavaliere system, especially for those of you who shoot while moving your camera around and/or your subject is moving. A wireless system is a great tool to add to your set of equipment. Note: UHF systems are best (less chance of signal interference), but VHF systems are OK if price is an issue.

Placement of the lavaliere mic plays a critical role in how the mic picks-up your subject's voice. Proper placement will help you capture good, clean audio. For the best results, have your subject wear a button-down shirt. The mic should come up from underneath the subject's shirt, so that the wire is hidden and connected to either a wireless transmitter (e.g. Azden WMS-PRO wireless microphone system, on left, for about $150)

or directly to the camcorder (e.g. Pyle PLM3 Wired Lavaliere Uni-Directional Microphone, on right, for about $10). Place the mic between the top two buttons, or about eight inches below the talent's mouth. By placing the mic below the mouth, rather than off to the side, you're maximizing the lavaliere's ability to pick-up sound. You may need to adjust the mic's placement, up or down, to find a location that best avoids the bass of the chest cavity and the pops of plosives.

Here are a few tips when using a wireless lavaliere system: 1) Always keep a line of sight between you and your subject, especially true with an UHF

system, 2) Always use fresh batteries in the transmitter and receiver devices for each event that you record (and bring along a set of spares just in case the first set gets drained before the event is done), and 3) When buying a wireless system, choose a diversity receiver system (i.e. there are two separate signals from the transmitter for the receiver to choose from so that you don't experience drop-outs).

2. No Mic Jack? No Problem! If you have a favorite camcorder, but it's missing a jack for an external microphone, there are some workarounds. The most obvious one is to simultaneously record your subject's voice into a standalone digital recorder (e.g. a Roland Edirol R-05 Voice Recorder for around $200) AND into your on-camera mic. Later in the edit bay sync-up the two sounds and then disable the camera mic's audio track while using the audio recorder's track for your movie. I do this all the time when I have two subjects to record in the same shot: one subject using my wireless mic and the other using the standalone recorder.

Another workaround is to make sure you're prepared to capture good audio. Locate yourself in the best position to capture the voice of your subject – as close as you can get while pointing your camera directly toward the subject with surrounding noises at your back. A third workaround is to ensure that your subject speaks directly into the camera microphone. Have the subject face the camera, or just off to the side by a few degrees. Don't let them turn their head away so far that you lose the volume and reduce the signal-to-background noise ratio. It's OK if they look directly toward your left or right shoulder, but not more than that.

3. Always Wear Headphones to Monitor Sound: Always listen to the incoming audio to your camcorder with headphones so you can hear what's being recorded. Pay close attention to any additional noises caused by the material of your subject's shirt, or a dangling necklace that scratches against the microphone – if there is, fix it. Practicing proper mic placement and monitoring will help you capture great audio every time. An additional way to monitor the sound is to use the camcorder's internal audio monitoring system if there is one available on the LCD display. This will tell you if the sound level is either too low (then increase the level setting) or too loud (then reduce the level setting). Back in the edit bay you can raise the audio level if it's a bit too soft, but if it's way too loud there isn't a lot you can do to eliminate the clipping,

4. Avoid Excessive Background Noise: This problem of background noise/ sounds is especially common when recording outdoors. The sound from your subject can be drowned out quite easily. You may not even know that it is if you're not using headphones because your brain actually filters-out those annoying sounds, but your camcorder doesn't whether your using it's on-camera mic or using a lavaliere. City traffic, nearby crowds and wind are some common background noises to avoid.

One final tip for recording sound: get at least 30 seconds of the ambient sound at your recording location. Use this to fill-in between clips and during B-roll footage that you shot when the ambient sound was probably different. Well, there you have some tips on how to get better recorded sound with your camcorder. Some of the tips involve spending some money, but remember that you only have to shell out the cash once to upgrade your audio accessory equipment. So, now when you set out to record an event or happening like a hike in Yosemite with a Park Ranger, bring along your wireless lavaliere system to put on him to capture clean, clear audio – you'll be glad you did. ∎

Welcome to the SUDOKU Puzzle

The goal of Sudoku is to fill in every empty box with one of six letters. Each letter can appear only once in each horizontal row, as well as only once in each vertical column and only once in each of the six 3X2 rectangles. This month's puzzle contains the letters **C, I, P, R, S** and **T**. These six letters spell a word very familiar to the Video Production Group that is making the Club's 2012 movie. The answer to this month's puzzle appears in the back of this newsletter. Have fun!

	I	S			
R		C	T		
		P			S
P	S				
	P	T			C
	R	I			

REFRESHMENTS VOLUNTEERS

The club thanks those who will or have provided refreshments. Please let Brian Lucas know which months you will be available to volunteer.

Jan 11th	Craig VonWaaden	July	Glenn Mooty & Milt Kostner
Feb 8th	JoAnn & Fred Pfost	August	Irv Webster & ?
Mar 14th	Nancy Wood & Trixie Visser	September	Virginia Misoff & Gordon Peterson
Apr 11th	Linda Grodt & Brian Lucas	October	Open
May 9th	Bill Loden & Craig VonWaaden	November	Open
June 13th	Jack Gorham & ?		

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

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www.viewfindersclub.org

Sudoku Puzzle Solution *from Page 7*

C	T	I	S	R	P
R	S	P	C	T	I
T	R	C	P	I	S
P	I	S	T	C	R
I	P	T	R	S	C
S	C	R	I	P	T

CLUB MEETING EVENTS
2012

January 11th, Wednesday

Award Winning Amateur Movies: screenings from recent AMPS and SCCA events

February 8th , Wednesday

Microphones. Fred Pfost describes types and performances

Let's Make a Movie. A slide show and discussion by Ron Rhodes

Tech-Tips: *"Cutting Classes - Blending Modes"*

March 14th, Wednesday

The importance of audio narration to capture and hold viewers' attention By Dana Marks - Voice-Over Professional

April 11th, Wednesday

Audio Sweetening/Fixing: Video Producer Chet Davis takes a look at audio software for improving audio quality

Tech-Tips: *"Capturing Sound in the Field"*

May 9th, Wednesday

Nimitz Grade School Movies: screened and presented by teacher Susan Woods

Tech-Tips if time allows

June 13th, Wednesday

Program to be announced

Tech-Tips if time allows

July: date to come

Program to be announced

Tech-Tips if time allows

August: date to come

Program to be announced

Tech-Tips if time allows

September: date to come

Program to be announced

Tech-Tips if time allows

October: date to come

Annual Member Video Contest: Screening of best movies produced by Club members this year

Tech-Tips if time allows

November: date to come

Golden DVD Awards Night: screening of the top three movies for the year; also election of Club officers for 2013

DECEMBER

No meeting this month