September, 2009, Vol 20-2

Western Pyrotechnics Association Newsletter



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WPA Newsletter, Volume 20, Issue 2

September, 2009
Volume 20, Issue 2

Western Pyrotechnics Association

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Do It Ain't Dead

By Tom Calderwood, V.P. Publications

So Do It didn't happen this year. Man, I hate that. And you're going to hate to hear that during the weekend that Do It *should* have happened, it was PERFECT weather in LHC! Argh!

The question is, will Do It continue? Well, it will if I have anything to say about it. But it's YOU that needs to say it louder and bigger! The turn out was abysmal. That was one of the (not the only) biggest factors in cancelling Do It. Pete will cover the issues on his section of the newsletter. Your Board is looking into a different location that will be less costly to attend (and sleep, and eat....) More on this to come.

In this issue, we'll first cover some club business.

Next, I went to the PGI convention this year and was glad to see Greg Dandurand there. He wrote up an article for the PGI bulletin and I was able to duplicate it here.

Chris Spurrell uses some space for confessions. Confess what? You'll have to read it to find out!

Bob Forward wrote up an article that was *just* a little late for the last newsletter but made it into this one. It is a novel ideal on forming rocket nozzles. It's definitely worth a look.

In this newsletter, we start with a 4-part article that Peter Schoewe wrote on his tour of some Chinese fireworks factories—complete with LOTS of pictures. It is a definite fascinating read.

I'm already at work for your next newsletter—so if you have anything to share to the club, fer cryin out loud—lemme know! I hope to find you and your family happy and willing to smell some smoke!

- Tom

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What's Happening!

By Pete Wood, WPA President 2009

By now, most have already heard, whether it be by word of mouth or by reading the WPA list, that DO IT was cancelled this year. For those reading this that might not have heard, I will (briefly) explain the circumstances surrounding the cancellation.

First, we were informed by Lake Havasu City that we would be required to place additional "pollution" insurance coverage on our current liability policy, for all future events, with DO IT 2009 being the first. This stipulation came to us in approximately mid-August. We then asked the club insurer to provide us with a quote for this coverage. This was at the same time that the PGI Convention was starting, and then the NFA convention followed. In short, it took over two weeks to get a quote for the additional coverage.

To provide this coverage that the City had requested, this additional coverage would have added in the neighborhood of $10,000.00 to our current policy. Through communications with our insurer and other club officials, we found that while this coverage might be requested in preliminary contract negotiations, it was most always waived. After learning this, Kief Adler tried negotiating this to be waived as well. Unfortunately, the waiver was not obtained by the time line I had requested the City to reply by, and so I had no choice but to cancel this year's DO IT. I wanted to give those members that might have already made hotel or house reservations, vacation time requests etc., hopefully, enough notice of cancellation so that they could apply for refunds and rescheduling of their time off in order to avoid penalty.

Now the GOOD NEWS is that the waiver was granted and so we no longer have this hanging over WWB XXI. I would like to thank the City Officials of Lake Havasu for coming back to the table with Kief in order to bring resolution to this matter for all involved.

Can I guarantee that this request for pollution insurance won't come back to us in the future?

No – my crystal ball is cloudy at best these days, but I can assure you all that during our early negotiations for WWB, we will ask for this waiver first thing so as to not have it come up at the 11th hour.

Secondly, and equally as important, was much lower than normal numbers of attendees for the event. After an e-mail poll was conducted by Manufacturing Chairman Bill Ryan, the results showed an almost 80% rate of past attendees would NOT be attending due to economic hardships. While we all completely understood this reasoning, it also must be understood that an event with a $7,000.00 budget cannot possibly be considered self-supporting when looking at 20-30 members that might have attended.

Many of you have heard myself and others before me, plead for the members who are planning on attending an event and to sign up early. While it's true that it can be a challenge to plan too far in advance, just remember that the BOD's and Staff have to commit well in advance of the event.

We only ask that if possible, you return us this courtesy as well.

Events can't just be turned on like a light switch – but they can be turned off quite easily.

Please just keep this in mind. It would make life a lot easier for all involved – including you!

I want to make clear that this cancellation was due to a combination of factors and there is no need for placing blame or finger pointing. Rather it just wasn't going to work this year – so we move forward, learn lessons and just DO IT better next time.

So, there you have the rest of the story.

Now please sign up early, rest up and save up for WWB XXI and let's plan on having a great gathering this coming February.

Sincerely,

Pete Wood
WPA Pesident 2009

From Your VeeP

By Kelly Goebel, WPA Vice President 2009

It was an interesting few days for your BOD, trying to decide the fate of Do It. None of us wanted to cancel the show but as a mentor once told me, "A good operator is not the one who knows how to shoot. The good operator knows when not to." The cliché would be to say that it was a hard and difficult choice. But it really wasn't. We have all felt the financial difficulties of the past year; painful would be a gross under statement for most of us. So it was no surprise that the attendance numbers came in low for Do It.

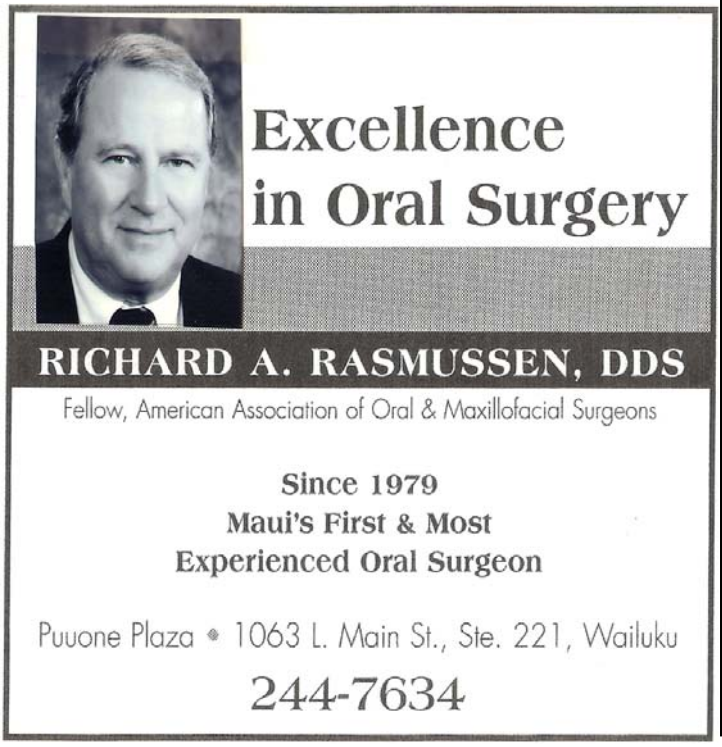
But there is a silver lining in this.

While we enjoy our solid relationship with Lake Havasu City, most of our Do It faithful agree that SARA Park is not the ideal location for this low-key event. As I write this, Pete and Tom are preparing to visit several locations in Nevada. In the coming months, your opinions matter. They will report back their opinions and we will all face the decision together. So hang in there. We may have pushed the red button, but the show will go on.

In the meantime, this gives your event staff more time to prep for Winter Blast! Lynden King is hard at work rallying the troops for WWB XXI. It's back to a 4-day event but chatter about big projects is starting to pick up. Seminars are already being filled. What will you focus on this year? Hey, the planning is half the fun, right?

Well, here it comes.. the big pitch you knew was coming... let's all try something different for a change. Let's show our support for the event EARLY. I'm usually the biggest pyrocrastinator but not this year. The Do It cancellation kicked my butt in gear. I've even reserved my hotel room already. Renew your membership. Register. Be vocal on the email list ,"Hey, we're going!" Start talking to your friends, peer pressure works wonders. Let's do what we do and do it in force.

See you all in February!
- Kelly



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Alternate Do It Site Selection

By Pete Wood, WPA President 2009

We have talked for years, of moving DO IT to a better-suited location – one that would be financially more suitable, and at the same time, one that might meet the needs for our manufacturers at the same time. We continue to chase this elusive unicorn, even as of this writing.

However, with the excellent footwork provided by John Dicks, we have leads on two communities in Nevada, which show much promise at first appearance.

Now, as I stated above, one major factor in choosing a new location is the costs associated with holding our event there. We know already that it is quite expensive for us to hold AND attend DO IT in Lake Havasu City due to permit fees, equipment, security, etc., etc. This will be a major factor when it comes time to pick an alternate site.

Additional concerns would be our curfew hours for shooting, noise restrictions, available on site storage for our equipment (long term), distance requirements, security and local AHJ cooperation. These are some, but not all, areas that need to be addressed when looking at a potential event site.

We also look at hotel / motel rates for club members, numbers of rooms, restaurants, and of course where a potential site is located in comparison to where the membership resides. Seasonal weather conditions also play heavily into the decision making process. I certainly don't want to shoot (or build) pyro in the snow. Do you? OK, I heard that Rob!

The gist of this is that we currently have a trip scheduled for Nov.12 thru the 15th, to meet up with John Dicks and hopefully the Officials at two sites in Nevada – one being in Fernley, NV and the other being Hawthorne, NV. Myself and your VP of Publications, Tom Calderwood will meet up with John and then try and spend a day at each of these two potential sites. While we are doing this, Rob Folek, is looking into the possibility of us revisiting Mesquite. Thanks in advance Rob, for your time and effort in this.

So, in closing, just let me say that we are moving ahead to try and find a potentially acceptable alternative for our DO IT event. This won't be decided overnight, but we will consider as many possibilities as we can possibly afford to take time off of our jobs and be away from our families in order to keep the WPA tradition of DO IT alive and hopefully, watch it grow in numbers and in interest.

We will post the results of our visit(s) in the near future and hopefully, have a more detailed presentation ready for the General Business Meeting at WWB XXI.

Sincerely,

Pete Wood
WPA President 2009

Classified Ads

Do you have a classified ad to place? Please send Tom a note at tom@westernpyro.org and he will get it into the next newsletter. Stuff to sell? Looking for something? Let'em know!

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From the Cushy Armchair of the Secretary

By Kathy Bauer, WPA Secretary 2009

I know we were all disappointed in the loss of our dearly loved Do-It by the River 2009. Even those of us that don't get to attend were surely disappointed that it was necessary to cancel the event. This gives us all the more reason to get excited about the upcoming Winter Blast XXI. Registration is underway and membership renewals for 2010 are arriving. It's an exciting time to be secretary. I look forward to receiving all our 3000 plus members' renewal forms by mail or online soon.

See you in February!
- Kathy

Western Pyrotechnic Association
Meeting Minutes
March 19, 2009

I. Pete called to order the teleconference meeting of the Western Pyrotechnic Association at 7:09 p.m. on 3/19/2009.

II. Roll Call:
Pete Wood, President
Kelly Goebel, Vice President
Tom Calderwood, Vice President: Publications
Ann Huffman, Out Going Treasurer
Debbie Ludwig, Incoming Treasurer
Kathy Bauer, Secretary
Kief Adler, WWBXX co-chairman

III. Approval of teleconference minutes from Nov. 12, 2009. Seconded by Ann Huffman approved by all.

IV. Approval of the WWBXX staff comp policy by Kief Adler. Seconded and approved by all.

V. Secretary Report: by Kathy

- 672 current members
- 446 Regular members
- 93 Spouse members
- 99 new members
- 16 students
- 8 corporate members
- 10 life members

VI. Treasurer's Report by Ann

- Western Pyrotechnic Association Profit and Loss Statement from 4/1/08 to 2/06/09 was discussed.
- Western Winter Blast XX profit/loss was discussed
- Extra expenses at this Winter Blast that are not usual included the extra day added to the anniversary blast and the extra public display added for this special Winter Blast.
- An investment in the new badge machine and its supplies were also an added expense to the profits for this

fiscal year

- Insurance payment is due in July 2009, Board of Directors insurance is due December 2009.
- Treasurer report to be printed in the newsletter.

VII. Publications Report by Tom

- On line newsletter was discussed. Tom and Kelly working on double checking email list for members.
- Cost effectiveness of the online version vs printing and mailing newsletter was discussed.
- Discussion about how to get newsletters for members who do not have emails and/or computer access or knowledge. It was suggested that newsletters be printed in pdf format and mailed to those without computers.
- Newsletter articles and advertising were discussed. It's hard to get articles from members to add to the newsletter. Is there enough newsworthy information for more than 3 newsletter per year.

VIII. Old Business

- Tom discussed the performance of the new badge machine. The machine was tested out at Do-it and was in full operation by WWBXX. The members liked the new badges and membership cards. The machine performed well, with a few jams here and there; mainly due to the amount of ink it takes to make the black background and the two sided badges.
- Another discussion was brought up about the transfer of duties the treasurer is performing that the bylaws state are the duties of the secretary, and vice versa. No decision was made at this time due to the recent change of treasurer and secretary. Once each becomes familiar with their jobs the board will discuss further.
- The board discussed the possible need for longer shooting hours at WPA events. Extra time was taken from WWBXX due to the extra nights' public display and traffic leaving the park by the back road. This should not be a problem at the next event.
- Also was discussed that open shooting continue during demo show. It was agreed that this would be disruptive to the demos, and possibly disrespectful to those volunteering their time and product for members' enjoyment. Possibly extending Do-it shooting time. Since it doesn't get dark until later, it is difficult to open shooting earlier. Possibly if Do-It gets moved to someplace that can handle later shooting the shooting hours can be increased.
- Members have voiced a desire for a coffee cart at events. The board discussed this and believe the food vendor on site for members should have coffee available and do not see the need for anything else at this time.
- Discussion of the future leasing, rental or purchase of Audio/Visual equipment for seminars. The BOD would entertain the idea of renting equipment if it's available in Lake Havasu, or if the presenter would arrange for their own equipment and let the BOD know the costs, if they wish reimbursement, before the event to see if there are funds available for the equipment. Winter Blast XXI chairman and seminar chairman should be contacted if there is a presenter who is interested.

IX. New Business:

- New board members discussed their duties and responsibly.
- Registration Chairman for WWBXXI: Don Oesterle has volunteered to stay on as registration chairman for the next year.
- On site transportation and parking for handicapped at events was tabled until next meeting due to time restraints of the teleconference.

Adjournment: Pete adjourned the meeting at 9:58 p.m.

Minutes submitted by: Kathy Bauer

Western Pyrotechnic Association
Meeting Minutes
May 21, 2009

I. Pete called to order the teleconference meeting of the Western Pyrotechnic Association at 7:05 p.m. on 5/21/09.

II. Roll Call:
Pete Wood, President
Kelly Goebel, Vice President
Debbie Ludwig, Incoming Treasurer
Kathy Bauer, Secretary

III. Motion for approval of teleconference minutes from March 19, 2009. Seconded and passed by all in attendance.

IV. Secretary Report: by Kathy

- 4 new members since the beginning of the fiscal 09/10 year.
- 676 current members

V. Treasurer's Report by Debbie

- Still working on resolving the bank signature cards. Board minutes from the general meeting needs to be given to the bank for verification of the standing board members.

VI. Publications Report not given due to Tom's absences from the meeting

VII. Old Business

- Kelly is working on continuing with the company that is doing the online web hosting. Motion was made to pre-pay Aplus+.net, the website hosting plan for 2 years, with a discount to us. They will make all adjustments needed to the site. Motion seconded and passed by all in attendance.
- Data base file on line was discussed. Kelly is working on this project. More information will be coming from him when he finds a private server. The database will then be available on line for the BOD and event chairmen.
- Price for attending Do-it may have to be raised this year. No set price was agreed upon as yet. Pete will work on updating the forms since they will be going out in the near future. This was tabled for further information needed by the BOD to make this decision.
- Debbie is going to email club lawyer for any problems he might see about changing around a few of treasurer and secretary's that seem to always have been done by that position.

VIII. New Business:

- Revocation of membership for member. This member was caught removing product from a public display, while working on the crew. Membership bylaws were discussed. Motion was made to revoke this persons membership in the WPA; Seconded by Kelly and approved by all in attendance. Kelly will write a letter to the member informing the person of the BOD's decision to revoke membership.

IX. Adjournment: Pete adjourned the meeting at 7:57pm

Minutes submitted by Kathy Bauer, Secretary

Western Pyrotechnics Association
Profit & Loss
April through August 2009

	Apr - Aug 09
Income	
Do It Income	
Donations	90.00
Registration	865.00
Total Do It Income	955.00
Donations	
Fireworks Fund	160.00
Total Donations	160.00
Membership	
2009 Membership	1,260.00
Total Membership	1,260.00
Other Types of Income	
On Line Fees	25.72
Total Other Types of Income	25.72
Pyro Playa	
Registration	500.00
Total Pyro Playa	500.00
Winterblast	
Clean Up	0.00
Winterblast - Other	0.00
Total Winterblast	0.00
Total Income	2,900.72
Expense	
Do It	
Site Preparation	
Containers	388.26
Total Site Preparation	388.26
Total Do It	388.26
General Operations	
Alpha Card Systems	
Cleaning Kit	52.10
Total Alpha Card Systems	52.10
Aplus	695.50
Computer Management	200.00
Dues	155.00
Humboldt Merchant Services	
Monthly Service Charges	253.48
Total Humboldt Merchant Services	253.48
Insurance	
Liability Ins. Yearly	54,498.00
Total Insurance	54,498.00
Mailing Supplies	18.09
Newsletters	
Mailing Supplies	33.08
Postage	17.50
Total Newsletters	50.58
Postage	132.93
QuickBooks Backup Server	149.95
Total General Operations	56,205.63
Professional Fees	
Accounting	550.00
Total Professional Fees	550.00

Western Pyrotechnics Association
Profit & Loss
April through August 2009

	Apr - Aug 09
Pyro Playa Expenses	
Site Preparation	
PortaPotties	108.00
Site Permits	95.00
Total Site Preparation	203.00
Total Pyro Playa Expenses	203.00
Taxes	
AG Registary Charitable Trust	25.00
Franchise Tax Board State of Ca	10.00
Total Taxes	35.00
Winterblast Expenses	
Event Meeting Costs	400.78
Winterblast Expenses - Other	0.00
Total Winterblast Expenses	400.78
Total Expense	57,782.67
Net Income	**-54,881.95**

Treasurer's Report

By Deb Ludwig, WPA Treasurer

Hello fellow members!

As you see our biggest expense for the first quarter of 09/10 year is our liability insurance. $54K is a huge hit to our club annually. The board has been in contact with other insurance providers asking for insurance quotes to see if we can get a better deal elsewhere. Hopefully we will be able to provide you more information in the next newsletter.

The Pyro Playa event had a profit of $297.00 for the club! Awesome job!!!

As of Aug. 31st, 2009 the registration and refunds for Do-It were not completely calculated so the next report will have the final numbers. All refunds have been issued as of Oct. 20th, 2009. If you have not received yours please contact me.

Respectfully,
Debra Ludwig
WPA 2009 Treasurer

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Shells Heading to Drying Area
(Story—Pg 20)



Panda Fireworks Co., Ltd. Liuyang Province, China
Fountain Assembly Room
(Story—Pg 20)



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P-G-Iowa!!!

By Greg Dandurand

["What the...? Isn't this a WPA newsletter? Why are we promoting the PGI?" Before you get your knickers into a bunch, let me remind you that: 1) the front AND back cover of a recent PGI bulletin were pictures from Winter Blast, 2) our two groups work WITH each other. While we may compete like brothers, we're still family. And when something threatens the family, we're arm-in-arm. And 3) I personally watched Greg work his butt off at PGI and realized this is the same kind of thing he does for WPA and any other group he's in. He gives 110%. Besides, he's a good writer. This article appears in both the WPA newsletter and PGI bulletin.—Tom]

As I left Sturgis, heading to Mason City, Iowa, for the PGI convention, I thought back over the highlights of the week. Musing about the near riot at Starbucks when the espresso machine broke down, and the pulled hamstrings in yoga class, I quickly put that behind me as I anticipated the week ahead. Crossing the Iowa state line, I stopped at the first rest area hoping for a free pig and some free corn. Leaving empty-handed (darn internet rumors), I had no further incidents before hitting Mason City.

Pulling into the fairgrounds just after dark, I realized I had no idea where I was camping, much less how to get in there. Flashing my PGI membership card at the gate, I had no problem gaining entrance and security told me the only places I couldn't go were the B line or class C sales until I had received my proper credentials the next day. After making a phone call and using the Cold War tactic of flashing headlights at each other, I was able to find my Michigan buddies and set up camp. Walking around, things seemed to be in the same areas. The North Iowa Fairgrounds are compact but have plenty of buildings to suit our needs. The differences this time were the large circus tent for rocket and small shell manufacturing, and the smaller groups of tents for large shell manufacturing. The class C line looked like every neighborhood Fourth of July show going at the same time in the same place. That scenario continued every night, all week long. I hope the vendors went home with empty trailers.

The next day, I drove off the grounds to do some much needed laundry. The Laundry Super Center was just across the way. I had a chance to look around. I had forgotten that the fairgrounds were right at the edge of town, and the area had grown a bit since last the PGI had been there. The famous French store Tar-get was close by, as was the requisite Wal-Mart. A large box store sat just outside the fairgrounds, called Farm and Fleet (or was it Fleet and Farm?). As the week progressed, I heard many wondrous things about this store, some kind of nirvana for everything you didn't know you needed, but I did not get a chance to peruse this place until Thursday. If you were looking for a full-sized fiberglass cow, along with a calf, some fake grass for them to graze on, along with a fiberglass horse, this was the place to buy them. And if you were worried that someone might try to steal



The "C-Line" as seen from the tracks

them, you could also purchase a life-sized WWII G.I., complete with service weapon at the ready. I swear I'm not making this part up, that stuff was really in there. But enough of my walk-about, back to PYRO.



Steve Majdali conducting the very popular "Hands On BP Rocket Building" seminar

There were shows Sunday, Tuesday, Wednesday, and Friday. If I miss a highlight of a show or mix up the day that it happened I apologize in advance. Things can run together by Friday, don't tell me it doesn't happen to you. Sunday night was the opening festivities, with the introduction of the board members, and welcome from the local convention and visitors' bureau. There were 3 displays, including the one from the Iowa Pyros. The one note I'd like to make is that on all the club displays that happened during the week, they meticulously thanked their sponsors and the display companies that had helped them out, either by donating product or loaning guns and equipment. That speaks volumes about the professionals in our industry, always helping out the small clubs to put their best foot forward at the convention. The evening displays went off without a hitch and we retired to the hockey arena for the Afterglow. Tim Walczak is to be commended for his work as the afterglow chair. He does a fantastic job of putting on a good feed for low dough. He catches his share of grief, so cut him some slack. If you can do better, step up. That also goes for all the other chairs and volunteers that make up this convention.

SCHREEECH! That is the sound of me dragging out my soapbox. I'll keep this short. Safety and Security staff and volunteers are there for your (and the general public's) ...safety and security (natch). Everyone has to realize that things change due to situations beyond your control. Just because a gate was unlocked 20 minutes ago doesn't mean that you can demand access through it now. Please stop berating the volunteers. They pay to come to the convention just like you. They trade their time (some of them quite a bit) for a t-shirt and hat. Put yourself in their shoes, literally, give some of your time, you might find you enjoy it. Soapbox gone, back to the rest of the article.

Monday was another muggy day with plenty to do during daylight. I went to a seminar, about getting legal as a hobbyist. The presenter did an excellent job, driving home the following two points: document all your conversations with government officials and it's not what you say, but how you say it (fireworks vs. explosives). The rocket/small shell manufacturing area was busy. Access was controlled, but entry could be granted after a briefing about egress and by wearing safety glasses. I had several friends at different locations in there, so I was able to come and go as I wished. I wasn't able to manufacture, as I did not have an assigned spot, but it was fun to hang out and ask questions.

Moving on to chemical vending, I caught up with my buddy Karl, who was pretty frazzled by the end of the day. He had volunteered to help Vince from FPAG grill brats and burgers for a chemical defense fund event. I asked how many tickets had been sold, but no one really knew. I said I'd help Karl grill. There were so many people, I thought they were being bused in from out of state. I didn't even want to see a brat or burger for a while, but everyone was a good sport and there were no major complainers. We did raise over $5000. Karl and I were sweated out after that and contemplated our evening's activities, as there were no scheduled displays. That called for a mass lantern

P-G-Iowa!!! (continued)

By Greg Dandurand

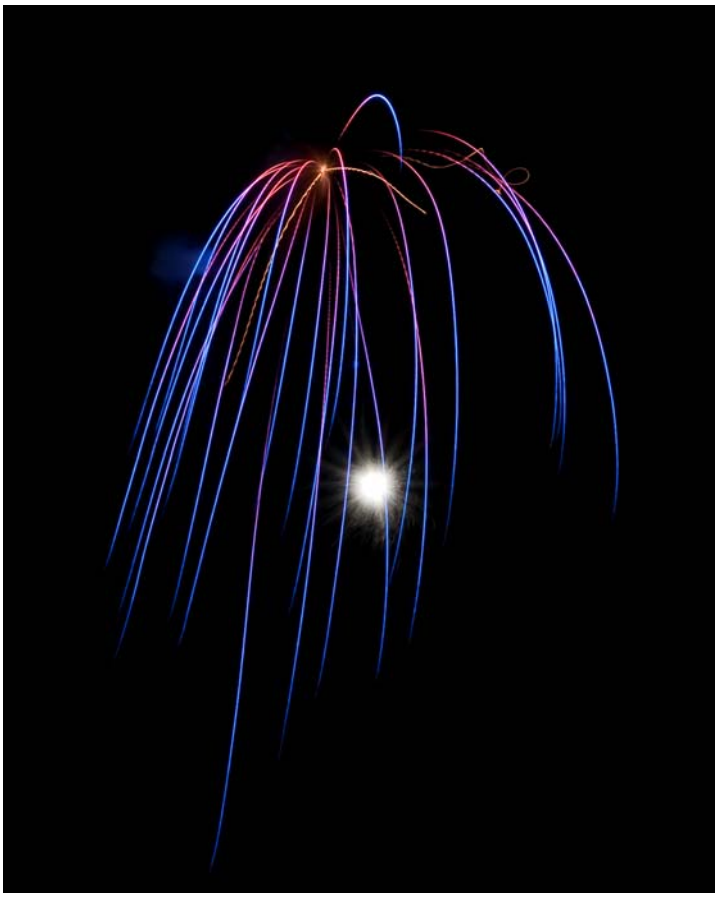


7-Break Italian Cylinder Shell with Bottom Shot

launch. Securing the ten lanterns needed was easy when you know people. I don't remember the people, but we knew them. Wanda from the fairgrounds came upon us as we were obtaining the lanterns, so we invited her down to the C line to assist in the launch. Starting some sort of pyro conga line as we headed to the launch pad, we had all the help we needed to get pour air force airborne. The launch went smoothly, except one got stuck in a tree next to a Suburban. With a WPA DO-IT flashback coming to mind, someone quickly grabbed a stick and the lantern lurched upward to try to catch up to the others.

Retiring to the arena where some frosty beverages had appeared, we reflected upon the earlier activities. Glancing at the cylinder full of raffle tickets from the fundraiser earlier (there had been prizes donated), my eyes wandered to the torch in my hand and an idea was born. I lit the tickets on fire and spun the barrel and voila the "Flaming Barrel of Death " (FBoD) was created. The others quickly sized upon the concept and we discussed the size and contents of the barrel. After a while, we agreed upon a thirty foot long, fifteen foot in diameter barrel, with railroad tie sized wood in it, impregnated with chemicals so they would burn in different colors, with the barrel being turned by the PTO from a John Deere tractor. Don't look for this in 2010 or 2011 or 2012, etc. A great idea, but a smaller scale version still needs to be done,with the logistics (and financing) for the full scale model up in the air.

The Iowa Pyros had scheduled some day trips for non- fireworks related activities to give people a chance to see other things. The Mall of America and Spam factory (did it have anything to do with the e-mails that show up in my inbox?) didn't appeal to me, but the John Deere factory tour did. That way I could research the size tractor we needed for the FBoD. The tour was Wednesday, and the quiet of the air conditioned bus was only broken by the snoring from myself and others. It was a nice comfortable ride and a good time to catch up on some sleep. No cameras were allowed, but we had a fantastic tour. This is the plant where the 9000 series tractors are built. Weighing in at over 45,000 lbs., they are available in tracked or wheeled versions. Trying to decide



Italian Cylinder Spider Shell with Bottom Shot

between the two, I was crestfallen to learn that the base price was almost $300,000. Spending the bus ride back contemplating a grant proposal to the board, I was needless to say, a little depressed when I got back to the fairgrounds.



View of the Member's area and the grandstands

That went away when I ran across a friend who was looking for some help to load his 24 inch shell for competition that night. The thing weighed in at over 175 lbs. so he needed a few strong guys to help. I went along anyway, and soon found myself steadying a behemoth of a shell in the back of a golf cart as we carefully picked our way through the display area out to where the 24 inch gun was buried. The gun was dug in right next to the rows of corn in the adjacent field. I joked to the others, "Can't you hear the whisper 'If you build it, we can shoot it.'". Everyone laughed. Then I told the shell builder not to worry if it detonated in the gun, because he would be setting two world records. One for the most corn popped at one time, and the other for the largest crop circle. Again, everyone laughed, well except for him, he failed to see the humor in it, but I did see him smile and knew he wasn't that mad. The shell later worked as advertised, it left the gun and broke with all effects working, it just didn't win first place.

Thursday was my Fleet and Farm visit followed by dinner off-site, with some non-pyro friends of friends who lived in the area. One guy was a hog farmer, so a few pig jokes followed by a Porky Pig impression really killed at dinner. I returned late, and found a few friends while wandering back to my tent that I visited with for a while.

Friday was sort of an up and down day. I was looking forward to the Grand Public Display, but know it was the last night and we would all go our separate ways on Saturday. The activities started with the officers being introduced, followed by the national anthem, then the Mega string raffle. The grandstands were full. I had purchased a ticket and was sitting with some civilians. I looked behind me at the parking lot and was glad I didn't have to leave tonight. The All Stars Display featured the hit single "Not In Commerce", a catchy tune, but probably not coming to a radio station near you. Their show was fantastic and you can't beat the caliber of shells that they build on site, all week. I later talked to one and he told me that they used Cheerios as filler to add bulk, but not weight to some of the 16 inch shells. The cereal aisle will never look the same to me again. Talk about Snap, Crackle, and POP! Soon the evening ended and as the crowd filed out, I overheard many words of joy. They want us back, I hope we can accommodate their wishes.

The next morning I packed up and said my goodbyes before leaving the fairgrounds. I drove in silence for hours contemplating future sites of conventions. As I entered the flat prairie of Kansas I imagined what a convention would be like here. My mind wandered, John Steinberg as the Green Man (wizard) in Emerald City granting Dorothy her wish to be at convention wearing her ruby work boots chanting, "There's no place like PGI, there's no place like PGI". The Tin Man gets a heart with feelings so he can do shell choreography. The Lion gets courage so he light a shell, and the Scarecrow gets a nomex suit, 'cause he won't last around a fusee. Everyone sing with me, "Stay behind the yellow caution tape, stay behind the yellow caution tape." The blare of the semi horn reminded me to pay attention and stay in my own lane. I set my course to Phoenix and reality and will see y'all in Appleton. Stay Green!!

- Greg

Confessions of a Ghost Miner

By Chris Spurrell

It's time to tell the truth about Ghost Mines and Colored Alcohol Flames. It started many years ago when I was using alcohol lamps once I found out that boric acid would dissolve in methyl alcohol forming the volatile methyl borate I was hooked and my lamps have burned with a green flame ever since. About thirty years ago those alcohol lamps were a hit at parties. Eventually we wanted more colors and it was pretty easy to look through the Merck Index to find which chemicals had some solubility in methyl alcohol. I had pretty good access to chemicals plus the amount of alcohol we needed to color was just a pint or less.

But when True Thomas, my professional story telling friend, wanted to set the mood in a large outdoor setting, we knew we needed something more than alcohol lamps. This is when we changed to stainless steel bowl and steel wool. The bowls came from the "99 Cent Store" and were thus disposable and we had found that, other than the boric acid green, the colored flames needed a wick of some sort that wouldn't contribute to the color of the flame. Now we were also using gallons of alcohol rather than a pint so we tried optimizing the chemical to alcohol mix. This is where the 50 grams per gallon figure came from. On a couple of the mixes the color improved up to that point and then leveled off. So, with the exception of blue, it went into the texts as 50 grams per gallon.



When we got the wild hair idea of firing it out of a mortar we just grabbed the colored flame alcohol mix, shot it and liked the color so it got written up as the "right" way to mix a "Ghost Mine". The trouble is we never optimized the mix for "Ghost Mines" we just kept everything the same because it worked! But also knowing full well that the colorant chemicals, especially the lithium would color a clear blue flame ruby red at just a few parts per million if properly dispersed. As with the alcohol lamps the chemical cost were initially trivial. But, when we started going through several 55 gallon drums in a weekend it became necessary to look into some cost cutting. We still don't know what the optimum amount of lithium salt.

Notice I didn't say lithium chloride? Lithium, sodium, calcium, potassium and boron don't need chlorine donors to develop their colors. The chloride keeps popping up because of availability and price. By the way, the cheaper the chemical the more likely it is to have sodium as an impurity and sodium is the worst color to try to overcome.

Purple alcohol bowl flame is nearly a waste of time, the color is really weak. However, purple Ghost Mines are one of the best effects. Since I had potassium iodide and it dissolved in methyl alcohol we stopped there. At Winter Blast XX we tried something new. With lots of potassium nitrate around we dissolved 400 grams into a gallon of water. Into each of the two gallon alcohol shots we added one quart of KNO3/water mix still keeping with the 50 grams per gallon but now the colorant chemical cost was less than a buck and the purple flame was identical to those using potassium iodide.

It turns out that a little water doesn't hurt the flame effect at all and it dramatically increases the solubility of mundane chemicals in methyl alcohol. So, as long as we are talking about the solubility of chemicals in alcohol, let's talk alcohol. In a lab context, if all you say is "alcohol" it's assumed you mean ethanol (aka ethyl alcohol, EtOH, grain alcohol, booze, rot gut etc.) But when it comes to Ghost Mines we keep saying methyl alcohol (aka methanol, MeOH, wood alcohol, torpedo juice etc.)

Yeah, it's the stuff that will blind you if you drink it. I really wish we could use something else but it has the necessary characteristics: burns with a blue flame, good solubility towards inorganic salts, cheap, easily available (as racing fuel). I've seen some grand failures when folks were sure that ethyl alcohol would work just as well. Sure, there are some other possibilities like acetone, ether, acetonitrile etc. but now the chemistry, cost and toxicity gets really hinky. So we use something that has about the same risks as gasoline from a health and flammability stand point.

Okay, let's have it out on the flammability part too. Because colored alcohol flames look so pretty and folks, like fire dancers, make the effect look so benign, some people really do think that these must be those "friendly magic flames" and not the sort of flames that hurt you or burn down your house. So while they wouldn't dream of lighting up a bowl of gasoline in their kitchen or living room, they charge ahead and light up bowls of alcohol, or better, they will stick their hands in the "friendly magic flames" and then get really pissed when they, or their kids, get burned.

On to technology, blue flame is a problem. Copper chloride was a natural choice because it was soluble, cheap and available. And at six grams per gallon it wasn't going to hurt any pocket book. But most people don't have it lying around. I had tried dissolving copper sulfate into methanol but so little went into solution I figured it wouldn't work. Happily others have used hardware copper sulfate with success so that hurdle is lowered. Unfortunately there's still the chlorine donor problem. There has to be chlorine in the flame for copper to impart a blue color instead of green. It looks like any volatile organic chlorine donor will work. I tried methylene chloride, chloroform, Freon 113, perchloroethylene and they all worked fine. Then along comes the Montreal Protocol because we were rapidly losing the ozone layer (every pharmacy in Australia has a skin cancer clinic!) and now the organic chlorides are darn hard to get. Which leaves us with using muriatic acid (HCl at the hardware store or pool supply) or possibly ammonium chloride? We got more work to do. I'm not crazy about shooting acid out of steel mortars with an audience down wind!



As long as I'm confessing I should mention that I've never shot a straight methyl alcohol Ghost Mine. I don't know if it will come out blue or purple from the potassium nitrate in the black powder lift.

Speaking of lift, after having both gasoline and alcohol mines not ignite or "blow blind" I figured having a little titanium in the lift charge that would generate white hot sparks couldn't hurt. Well, ignition didn't get that much better. Watching video clips frame by frame showed that the cloud of fuel vapor was sometimes still barely getting lit and the titanium sparks were a distraction from the delicate Ghost Mine color for some people. We then changed the lift from 4FA or 3fg to a 50:50 mix of coarse and fine black powder (2FA and 4FA). Now the videos show essentially perfect ignition.

One of the most exciting developments in Ghost Mines has come from a rather talented fire dancer who wanted a closer and more intimate effect. Michelle Sykes scaled down the Ghost Mines to mortars that only fired a pint or two. The black powder charges were a piece of heat shrink tubing plugged on one end with hot melt glue and then just 5 to 10 grams of black powder are added along with an e-match and a little more hot melt glue which caused the lift charge to get all nicely compressed. Michelle has performed at a couple of Winter Blasts with these diminutive Ghost Mines. If Harry Gilliam did us a service by coining the name "Ghost Mines" Michelle went one better. Her little ones are called "Caspers"

I'm grateful to the people who saw this effect and fell in love with it. They are the ones who have taken this nearly forgotten effect and made some the Harry Potter Hollywood stuff pale by comparison.

- Chris

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Thank you ALL for your continued support of the WPA!

We would like to take this space to express our heart-felt thanks to our corporate members. These are folks who recognize that the health and longevity of pyrotechnic clubs and organizations is responsible in part of the continued success of fireworks in America.

The WPA is reliant on our corporate members continued support for the health of our club, especially in these hard economic times.

When we say "Thank You", it is not a meaningless phrase. We really mean it.

A Note About the Cover

by Tom Calderwood

The cover is based off of an image I shot at WPA's Life-Time Member Don Oesterle's July 3rd show at the Santa Monica Beach Club. He was gracious enough to let me head over even though I had a few doctor's restrictions on lifting. I was able to fuse up some shells, and when it came close to show time, I hiked south on the beach. As the show started, twilight was still visible in the evening sky—and I snapped away. You can see the rest of the images here:

http://www.thecalderwoods.org/pyro/20090703_SMBC/
(I used #27)

The rest of the pyro pictured is from the PGI conference in Mason City. It was my first PGI event, and I'm still reeling from it. Photography wise, when you can get *very* dark sky, you can get *very* good pyro images! I'm kind of jaded when I shoot pyro in the Los Angeles area because of the light pollution, so when I can get black -black skies I try to jump on it. I think this is some of the best stuff I've ever shot. See if you agree:

http://tccphotography.zenfolio.com/pgi2009

As always, feel free to snoop around. I love this stuff, and I love sharing it as well. Stay Green, shoot early, and shoot often.

- Tom

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Candy Rockets, Candy Nozzles!

By Bob Forward

Spin-stabilization on a fireworks rocket is not new. The short, fast-spinning "Stingers" are perhaps the best known example. However, I've found that spin-stabilization doesn't actually require as many RPMs as a stinger's design induces. Some of my earlier attempts using angled vents drilled in the nozzled area of the rocket were crude indeed, with the vent angles eyeballed into a vague symmetry with a hand drill. But they flew, most of them spiraling only two or three times a second, similar to a girandola. Spin stabilization is amazingly forgiving.



The main problem with spin-stabilized rockets seems to be the formation of the nozzle – more specifically, how to create a nozzle that will use a portion of the exhaust to spin the rocket – and still keep the process cheap and simple.



It was while watching a movie that one possible solution came to me. I noticed that the Red Vines licorice candy I was utilizing to bring further joy and fortune to my dentist was a distinct spiral shape, with six prominent ridges. Taking some of the candy home, I chopped it into 1" lengths and used these lengths to cast nozzles using Durham's Rock Hard Water Putty. The Red Vines bits were impaled lengthwise on a short length of bamboo skewer (the kind available in the Oriental Food sections of your grocer's – they're only a couple of bucks for a package of 100, and make great bottle rocket sticks as well.) The pointy end of the skewer was poked into the bottom of an overturned paper cup so that the bit of licorice was held upright, and a 1" heavy-walled spiral tube was centered over the upright candy and lightly tacked into place with hotglue. Some Durhams Water Putty was mixed to the consistency of heavy cream and poured into the tube to a depth of about 1/2" to form the nozzle.







Even as the putty set and hardened the candy itself dissolved from the moisture, so that by the next day it was easy to remove with a toothpick, leaving a nozzle whose bore was sharply fluted in a "rifled" pattern. Make sure the exit flutes are nice and clean and venting at an angle by using a small file or metal pick.

Given that I was casting the nozzle from candy, it seemed only right that I make the propellant that way as well. I cooked up a batch of my fa-



Candy Rockets, Candy Nozzles! (continued)

By Bob Forward

vorite candy rocket propellant, which I call "Sourball XY". This uses Xylitol and Vitamin C powder, both available at health food stores and online. The Xylitol – a low-calorie sweetener – melts at a very low temperature and the concoction will easily melt in a small crock pot.

Potassium Nitrate – 54
Xylitol –27
Ascorbic Acid (Vitamin C powder) – 8
Sulfur – 7
Iron Oxide, red – 4
Total – 100



Grind all ingredients fine, mix well, and melt in a crock pot set on High.

Filling the tubes is simply a matter of scooping the molten mix into the tubes and tapping them on the ground a few times to get the mix to settle. (With narrower tubes, it is often easier to let the fuel cool to a warm but not hardened temperature and roll it into balls with rubber-gloved hands, dropping them into the tube one by one and tamping them down with a dowel.) The nozzle hole prevents trapped air at the bottom but the hole is too small for the thick propellant to fall out the base of the rocket.





Once the tube is filled and tamped, a core is created using any available greasy metal spike, such as a large nail, a Philips' head screwdriver, or any handy rocket tooling you may have around. Coat with Vaseline and slide the spike up inside. In an hour or so, when the propellant has cooled, a simple twist removes the former, leaving a nice core.



The propellant will stay malleable for several hours even after cooling, and I generally prefer to let it sit overnight in a dry area to harden completely. It is somewhat hygroscopic so damp areas should be avoided.

Please note that while Xylitol is harmless to humans, it is dangerous for dogs. Because it is sweet they will eat any residue you may leave laying around, so it is important to clean everything up if you have pets.

My initial tests were flown without headers for safety. They were simply loaded into a fencepost pipe which was just wide enough for the rocket to spin without any undue wobbling. Sure enough, as they exited the pipe the flutes in the nozzle had them spinning like a thrown forward pass, and they sailed into the sky without stick or fins.

Due to the constraints of the pipe, I would imagine that a header would need to be approximately the same diame-



ter as the rocket itself, but further experimentation is needed. I am also experimenting with nozzles cast of resin and sand in a mold, to create nozzles that can be epoxied into the tube. The advantage here is that a number of nozzles can be cast and then simply tossed in the dishwasher inside a wire basket – the hot water dissolves the licorice leaving a clean, ready-to use nozzle. I'll let you know how it works out!

UPDATE: Resin nozzles don't cut it. It erodes the flutes way too quickly, so we're back to the original!







A Tour of Chinese Firework Factories

This is part 1 of 4 on 9+ firework factories toured in Liuyang China

by Peter Shoewe

My interests in fireworks began at age 5 when a friend lit off a pack of firecrackers for me his dad brought from another state. We always had fountains on the fourth in southern California and around age 8 I could read the labels well enough to understand the words, "Made in Peking." If that's where they're made then that's where I'm going. Years later I was disappointed to find Peking changed their name to Beijing, which made it hard to find on the map and worst yet they didn't make fireworks either, if ever, instead it was some city named Liuyang. Where's Liuyang? Why didn't they just put that on the label then? Most Chinese travel agents didn't know where it was either and wanted to send me someplace else. They kept asking me "why do you want to go to Liuyang, there are more interesting places to see in China." I started to doubt this trip could even be made.



Hong Kong

HONG KONG

It was 6:30 Sunday morning July 13th 2008. I had just woken up after getting 4.5hrs sleep at the Chung King Mansion on Nathan road. I was in building 4, floor 13, room 20. All 3 of these numbers mean bad luck to different cultures, which had me worried there. On my flight back to Hong Kong the next week I read in the newspaper "Today July 20th is the day Bruce Lee died of an allergic reaction."



Bruce Lee Statue in Hong Kong

A third young man from Ghana worked the front desk now. It had rained last night. I took the bus to the airport at the suggestion of a local, not a good idea. The driver accused me of not putting in enough after he dumped my money before he counted it. A new friend stepped in and said he saw me put in the right amount or I would have been shorted another $3 US. I noticed my compass always pointed south in Hong Kong. I didn't figure out until 3 days after I got back. It really made it hard to get around always walking the wrong way.

I called Sonny at the airport to let her know I was on my way. She's the fireworks export company owner of Flying Dragon was picking me up from the airport in China.

I was off to Liuyang China in Hunan province where I would tour 9 Firework factories, including one for mak-

ing paper shells, two factory supply market areas, a potassium perchlorate factory that no one had ever toured before, two firework label print shops, a fuse factory and 2 Pagodas. Two of these factories were for sale.

Liuyang is about 1.5 hrs flight north from Hong Kong. 40 minutes drive East of the Changsha airport, while Changsha the capital of Hunan is 40 minutes west. Hunan is the most mountains and forested province in China. This time of year it was around 95 degrees F. with 90%+ humidity. It was supposed to rain a lot, but the news said it was unusually dry this year after a 20 year high snow storm this past winter. It only rained a few hours the whole week I was there, starting just as I walked in my hotel room one afternoon later in the week.

CHINA

Coming down for a landing I saw small 5 acre farms with large 2 story nice houses, more house than farm. A former Hong Kong Police officer with the auxiliary for 17 years now in his late 70s I met in Hong Kong, told to be "very wary of pick pockets and that he grew up in Changsha. I should protect my things and hide my money in many pockets so they don't steal all of it." Construction of 2 story buildings right next to the runway looked too close for a 747. The airport was deserted except for the 10 customs workers and the 35 passengers. Everyone was Chinese except for 5 of us. Everyone except for me goes through the checkpoint in 10 seconds. The young agent behind the desk kept thumbing through my passport and looking over his shoulder for several minutes. It was a new passport with only a Hong Kong and Chinese visa stamp in it. I knew there was a problem already.

He called his supervisor over who walked me through. He looked at my passport and started asking me questions. What are you doing here, where are you from? I started thinking about an American who visited Northern China 6 months ago on vacation and while there, some police and military were out stopping protests. He videotaped it and put it on line. The next day someone else in China saw it and called the local government. They found him in his hotel and locked him up. For the next 3 days they questioned him then deported him back to the USA. As of January 2009, anyone seen taking pictures or video tapping any police or military anywhere in the UK can also be arrested and fined. He soon asks if I'm a journalist. I tell him 'No.' Now 3 long minutes later he gives my passport back and lets me go.

From a small crowd of 20, Sonny walked over with a man and asks if I was Peter, to which I say I am. Outside it's very hot, humid and smoggy. We get in a late model, clean looking, black car with tinted windows and leave to town.

www.lxfireworks.com

> Around age 8 I could read the labels well enough to understand the words "Made in Peking." If that's where they're made, then that's where I'm going!

The drive to Liuyang was rather depressing. The buildings looked broken up, like an abandoned town. On the four-lane country road we're surrounded by farmland and green trees that lined the highway at many places, occasionally passing bicyclists, mopeds, people walking, and some stalled out cars. We crossed under five overpasses with big signs advertised firework companies. Road tolls charged around 30RMB each or about $4.20. Every time we passed someone we honked. There was a lot of honking going on. Drivers crossed over the double yellow line and we swerved out of their way. The speed limit was never more than 60 km (37 MPH.) After 3 long tunnels, the last one 2 miles long, we were on the other side surrounded by hills with green trees and Liuyang.

LIUYANG

A mile later, a building on our right said 'Union fireworks'. There were four stories with many firework supply stores out front covering an entire city block. We drove down the four-lane main street with lots of cars and people walking on the sidewalks, with 10 story buildings on both sides. The city is surrounded by 300m tall hills full of trees. It was around 7 PM.

A Tour of Chinese Firework Factories—continued

by Peter Shoewe

Liuyang became famous around the 16th century when someone managed to put black power in a tube of bamboo and made it go bang. Now Liuyang has around 2000 firework factories within a few hours drive, I was told by many that there were around 6,000 factories in all China. There are three rafting companies within 45 minutes, Class 1-2 factories and about 20 high rises currently under construction by foreigners, with many more already built. The mayor welcomes them all. A 2 bedroom condo they call apartments that sold for $20,000 in 2006 now sells for $30,000. The leases on these are only 50 years. After that no one knows what will happen as this is all still new.

"She asked me what I wanted to see tomorrow and I tell her a Sky Lantern factory, and shells and rocket making facilities."

YIN TIAN HOTEL

We arrived at the Yin Tian Hotel for dinner. Prices here start at $65 a night US. It was 20 stories high and built in 2006. It was very modern looking and only 40m from the Liuyang River on the south side. There were only two streets on this side of the river. Most of the town of 180,000 population is on the north side. A tall lobby and stair case took us upstairs to the buffet. There was no Western food and I was the only foreigner. Only a few tables were occupied. During dinner, Sonny tells me one American sent her 20% deposit for a shipment of custom labeled fireworks and he never paid her the rest. It's been over a year now. She has called him on the phone but only his wife answers and he won't take the calls. She's upset about this and will only take 100% payments for fireworks now.

She asked me what I wanted to see tomorrow and I tell her a Sky Lantern factory, and shells and rocket making facilities. She asked about firework sales in California. I tell her its only one week before the 4th of July and fireworks are legal in only 15% of all cities. She tells me the factories are very busy now as they will get shut down everywhere in China for 2 months staring August 1 for the Olympics. She tells me shipping containers are 40 feet long and have a weight limit. Several shipping ports have been closed for firework shipments because of the Olympics so there's a delay getting product out. The government doesn't want any accidents. Sonny says that in the US, we will commonly order only 20-50 cases of one item. She has to rent a truck to drive around to all the different factories and it costs her more. Europeans will order one shipping container of the same product. Companies now focus more on the European market.

Sonny said that she has tried to get a visa a number of times and is refused, even with an invitation to a PGI convention. Now she feels discouraged and thinks she will give up, never leaving China even for a vacation.

The buffet food was too spicy hot! I drank orange juice to keep from breathing flames. Afterwards I had some very interesting deserts with 4 different flavors of ice cream that tasted very heavy of cream with a ton of sugar. From here we drove 3 blocks to my hotel the Grand Sun City.
www.yintianhotel.cn

GRAND SUN CITY HOTEL

Built in the 1950s, the Grand Sun City Hotel sits on 250 acres of land hugging the forested hills only 2 blocks from the Liuyang River at the south edge of town. It has a large public swimming pool, a hiking trail to a Gondola with view of town, tennis courts (in need of repair), a basket ball court, a duck pond without any ducks and a large restaurant. Sonny and the driver walk me to the front desk. I'm in a 5 star room on the second floor with view of the town. As soon as the front desk clerk opened my door there were 4 people in my room already, I thought this was strange. A man in a blue jump suit uniform kneeling in front of the TV with a tool box on the floor



Grand Sun City Hotel

next to him, a woman standing next to him looking at the TV (which was off) and two lady housekeepers around 20 years old, walking and looking at the beds. The TV man closes his tool box and stands up. The front desk lady and Sonny walk in. They all walk out, then the driver and I walk in. I asked her what this was about. She said they were fixing the TV. I thought at 9PM Sunday night? I assumed it was staged. The room smelled of wet, rotting wood, but livable and with 2 queen sized beds. Sonny would pick me up tomorrow at 9am. I had a sore throat from getting too little sleep the past two nights and I couldn't get the TV to work. At around 2 AM I was woken to the sound of some strange birds squawking outside.

http://www.gscrly.com

It was 6AM when I was woken to China's discovery of the car alarm and more birds. Today I was off to see 3 factories, my first being one that made Sky Lanterns. I went outside and sat on a bench waiting for my ride. It was already hot and humid. I brought along some water and now my camera lenses were fogging up from the humidity change. I wondered if the fogging would go away and it did. My ride came by at 9:15 in the same late model new Japanese car. Someone else got in with us. Sonny said that he's building a new factory. We never said a word to each other. I find out later he didn't speak English. The highway looked more like a country road in the U.S. People drove all over the place. They were on our side and we were on theirs. You simply had to swerve out of the way. Even the police drove head on toward us and swerve out of our way on the last second. The yellow dividing lines are only suggestion lines and there was not five minutes when the horn was not honked. They take this to an extreme!

THE SKYLANTERN FACTORY

We drove east about 30 minutes into a small farming town with a population of about 200. We went up a gravel driveway with meter high over grown green grass on both sides to an old elementary school house. (The new one was down the street.) There were only 2 buildings. The front building looked like a home while the back had 4 classrooms, 2 up and 2 down. The owner is 21. He went to college in Shanghai and one day while on vacation in Sweden he found that the people over there liked sky lanterns. That is when he decided to start making them. He found not many companies in China made them anymore. He went to Shanghai to learn how to make them from a factory. Then, 30 minutes east of his home town of Liuyang, he bought this property. At the factory there were about forty women working in three different rooms. Each wall had long tables against it as well as down the middle. One room was for storage only,



Skylantern Factory

where stacks of thin tissue paper were against the wall 3m high in 4 different colors, already cut to shape, filling 30% of the room. In the stairwell was a 40 liter aluminum pot holding the glue they used. In one room women folded and glued the tissue papers around the bamboo

A Tour of Chinese Firework Factories—continued

by Peter Shoewe



Skylantern Hoop Making Room

frames, sitting side by side at the tables. In another room they made the basket and bamboo frames. In another room they put all the items into a slip of plastic with instructions and then into a box. They made 3 different sized lanterns.

I felt a bit awkward as if I was intruding on them. They worked 5-7 days a week from 7am-6pm by choice and were paid by the job. They could take off any time they wanted and earned from 40-70RMB (6 to 10$) per day, One woman who lived here cut up a watermelon and a five year old boy gave me a piece. I ate it while I watched the women make bamboo frames. I took a picture of



Skylantern Factory Manager



Peter's driver and Sonny holding up a Skylantern

Sonny and the driver holding up a large white paper lantern. A 20 year old lady is the manager, she's the younger sister to the owner. From here we went to the Panda factory.

www.skylanterns.cn

THE PANDA FACTORY

The 15 minute drive drive over the road had some pot holes with slow, old, farm trucks. There was farm land on both sides of us with over grown trees and green grass along the road. We drove up a clean, wide driveway 100m long with a sign out front that said Panda. Now that was a brand I was familiar with! We parked under a covered parking lot with 10 other cars. The cars looked new, black, Japanese and US models with heavy blacked out tinted windows. The emblems on the back of the cars were in English and Chinese. It was hot, and in 5 minutes I was drenched in sweat. Across from the office was an-



other two-story building. This is where some employees lived and ate lunch during the week. There was a small kitchen and showers inside with individual rooms. All the buildings here and at other factories looked modern and clean, while the inside had dust on the cement floors. A young man in his mid 20s came out. He must be one of the big bosses. (I could tell by the way he was dressed.) We shook hands and started walking.

Sonny used an umbrella to keep the sun off. The factory was surrounded by a cement 4m high wall. We walked past the guarded entrance gate and a guard in a small security house. This place was 1000 moos in size (about 250 US acres). There were 30m long buildings on both sides of us, 10m wide. The first ones had boxes full of fireworks ready to be picked up by a semi truck. The next eight pair of buildings had ten to forty people working in each. There they made rockets, cakes, firecracker tubes, and 1.3 and 1.4G roman candles. The finishing room put labels on packages and then packed the shipping boxes. I



Fireworks Labels

walked in any one I wanted and did with at least seven. All the buildings had signs out front on a post saying what each building was used for in English. One building had many young men and women in their early 20s. They were from a university in Shanghai and worked here only in the summer. In another building were five firecracker tube rolling tools. These were about half a meter high, made of wood and looked like a pendulum. As it swung, a strip of paper would get rolled up into a tube. I asked the manager, who spoke some English, if I could see the chemical mixing area. He said "No, it's too dangerous."



Product ready for shipment



Firecracker Tube Rolling Tools

A Tour of Chinese Firework Factories—continued

by Peter Shoewe

After these large assembly buildings we walked along the hillside on a one lane road with a corrugated sheet metal roof to keep the rain and sun off. The cement walkway wrapped around many hills for about 7km. The top of the hills here were about 30m higher than the valley. In



Shell Assembly Room

the valley was farming (not owned by the factory). Along the cement road were 180 + small buildings, 3x6m in size, and made of cement with a wall down the middle. Each half had a woman 30-50 years old working in it.



Day Use Box

Because of safety concerns, there was no electricity. This front side had no wall and a windowless window in the back. They worked at a cement table that was cemented to the wall. They assembled shells from 4" on up. A small 1x1m cement box was built into the hillside between each building where stars and black powder were stored for day use. Occasionally a 2m long wood cart would get wheeled by us full of finished shells.

I had a white handkerchief in my button up shirt to wipe the sweat off my face. I wore no T shirt for the heat. I soon realized, as one Chinese man in his 60s pointed out to me, that I was the only one sweating!



Drying Out Shells Headed To The Olympics

Stacks of drying screens full of shells sat under one roof. These were going to the Olympics. There were only 4 companies making shells for the Olympics. I thought about being lucky to get here when I did because of the upcoming factory closures for the Olympics. There should be no accidents while the world watched. The local newspapers reported explosions quite often I'm told. After 15 minutes we walked back to the larger assembly buildings in the flat area where the five of us first came in.

Between each small building was an above-ground cement pool of water about half a meter in diameter to put



Emergency Water Supply

out fires with. Between the larger buildings, they were oval and 2m long. A hand pump would supply water to a 2" diameter canvas hose, but many times I never saw the hose or buckets. Fruit trees were commonly planted between the assembly buildings. Here the women, as with other factories, were paid 40-70Yaun a day.

The work schedule is the same at all the factories I went to. They can start and stop when they want, work 5-7 days a week and take off any day or time they like. Employees are paid once every 3 months. Here at the Panda factory there are 300 workers during the slow season and up to 900 during high season. The chemical mixers were men and started work around 2 to 4 in the morning. They stopped by 11am for the heat that could cause an explosion. In the winter they work in the day when it's not as hot. We shook hands at our car, thanked everybody and left to the rocket factory.



Rocket Factory Office

ROCKET FACTORY

We drove 10 minutes down the road and past a security gate with a gate monitor in his late 60s watching TV in the small 2x2m guard room. At the office, I stood around outside as they talked indoors. Sonny came out and said



Rocket Factory

the rocket factory was closed for the day as they were expecting a government inspector. All employees were told to take the day off to avoid being seen making a mistake. Here too, there were around 900 employees worked during full production. There were 15 or more large build-



Rocket Factory Showroom

ings just past the second gate and 150+ 3x6m buildings that wrapped around the hills for 7 or more kilometers, but out of sight. I took pictures of the office, of the assembly buildings, the large water tower and the factory show room where rockets had labels in many languages for countries around the world—the USA, England, Ger-

A Tour of Chinese Firework Factories—continued

by Peter Shoewe

many, Russia, Norway, Brazil, South Africa and elsewhere. After 20 minutes we drove to a restaurant down the road. It was a lunch to die for.



Rocket Factory Showroom

LUNCH

We were at a 2 story restaurant in a town with a population of about 100 that looked deserted and surrounded by farmland. The individual rooms were upstairs where we ate. In the kitchen Sonny negotiated what we would eat. Like all other hosts, Sonny asked if I like my food hot. I said it's OK. The room smelled of old cooking oil and was dusty. I tried a spoonful of soup and suddenly I had a hard time breathing. I thought something was stuck in my throat and drank some Cola. Sodas were served at room temperature everywhere, (but the beers were cold!). I drank hot tea, water and soda again. It didn't work! I became shaken up and thought I would die! I kept sipping liquids and pretended I was busy thinking about what I was eating. Two minutes later I figured it out. I never had these types of hot spices before and I was having an allergic reaction. Later that night, I also found I was coming down with some kind of sickness. My throat had instantly swelled shut. If someone gave me the Heimlich maneuver my throat may have closed completely. I kept drinking everything in front of me and tried to remain calm. Would an ambulance have to take me away? In another 2 minutes I could breathe normal again. I was really scared, but then I tried 1/8th tablespoon of that soup again, then a ¼, then half and soon full spoonfuls. Nothing more came of it. This was the only time before or since this happened. From here on, I breathed through my nose. This kept the hot spices from going into my lungs.

I asked Sonny about prices for fireworks products. She said they used to have a price list that all factories would give out. But starting around July of 2007 this stopped and they only gave out a phone or fax quote because the prices would rise so fast. Then around January 2008 this stopped and now they only give you the price the day you buy. You have to ask the price for today. The price of raw ingredients is going up so fast that by next month they will have to charge us more. Labor cost is going up as well.



Next on the menu ... Garden Snails!

Next on the lunch menu, we had cooked, spiced garden snails. Yup, the same kind we have in our backyards. I asked if they were grown for eating as we do with earthworms for cookies, cup cakes and pastries, Sonny said no, they are just picked from the field somewhere. I watched others eat them first. Not too tuff. I think it was the entrails that gave them the sharp flavor.

I was dropped off at my hotel around 4 and took a taxi to

the 9 story pagoda on the 300m hill. The taxi's are the smallest cars you've ever seen with steel bars between the back and front seat and dents all around. It was a 7km long, narrow, winding dirt road with many potholes that would rattle your dentures out. I never would have guessed this was the way. The driver spoke a little English, asking me where I was from. The houses up here where for the richer Chinese. From the Gazebo, I can see the layout of the town. This was useful.



Pagoda



View from the Pagoda

At the hotel I swam in the pool for $4.50 US. (It costs more for non-guests.) A 5-year old girl sitting on her dad's shoulders yells out while pointing at me. "Meigoren!" (Translated: "American!") Now everyone in the pool knew there was a foreigner here. Anytime someone saw me they would take a long look. I only saw 4 other westerners at my hotel during the week, one at a time and none at any other time anywhere. I walked up the trail in the overgrown forest to another Gazebo with view of the town. A sign in the beginning of the trail said in Chinese only, "Watch for poisonous snakes."

I was surprised to find 75 TV stations, 3 in English - the BBC, MTV and a nature show. In Chinese there were Hong Kong soap operas, Hong Kong action movies, news, and game shows. They had Chinese westerns and I found only 3 radio stations on AM or FM.

I called Union fireworks and Flying Eagle about my meeting with them tomorrow. Just as the sun set every night, I would hear a strange buzzing sound coming from the forest from tens of thousands of bugs that would last about an hour. I was coming down with something as I would cough for half an hour while trying to sleep and it was waking me up. Tomorrow I will be off to more factories.

A list of 60+ of Liuyang's firework factories: http://www.conglomerate.net/manufacturer.html?c=entertainmentands=fireworks

Photos of the 9th (Liuynag) international Fireworks Festival May 2009

http://viewmorepics.myspace.com/index.cfm?fuseaction=user.viewPictureandfriendID=404110155andalbumld=1358177

These 2 are still good as of Sep 2009. *(note—click on the links. ed.)*

- Peter



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