

Important Natice:

The Western Pyrotechnic Association, Inc., also known as the WFA, is a non-profit group of fireworks professionals and their apprentices. This newsletter is a vehicle for their exchange of information in this craft, and the right to publish this information is guaranteed by the Constitution of The United States of America. Nonetheless, readers are urged to learn and aboy all laws and regulations of all federal, state and local jurisdictions and of their agencies and representatives. Some information herein may contain incomplete descriptions of financial techniques based on the experience of its author(s) in a controlled environment with circumstances and conditions different from a reader's. Readers must form their own opinion as to the application of this information. This information is considered documentary in enture and no opinion is given as to its suitability or use. He warranties are made either expressed or implied, including but not limited to warranties of the accuracy of the information herein. The Western Pyrotechnic Association is not responsible for the opinions of authors or mistakes in printing. All information is intended salely for viewing by members of the Western Pyrotechnic Association, Incorporated, and its associates. The WPA's entire liability and ensure else's remedy shall be a refund of the subscription price. In no event shall the WPA, or its officers or the editor be held liable for any damages whatsoever prising out of use or inability to use the information in this publication, even if said parties have been advised of the possibility of such domoges.

This publication is published by and is the sole property of the copyright owner, and is not to be sold, distributed or reproduced in whole or in part without written consent of the editor and publisher. The contents of this newsletter is @ Copyright 1997 All Rights Reserved by The Western Pyrotechnic Association, Inc. or by the author(s), if so indicated, and is republished by permission of the cogyright owner. Any previous agreement to allow anyone to re-publish any material from the WPA, Inc. Newsletter is revoked and vaid as of March 1, 1995. Reproduction without permission will be deemed a purchase and implied authorization by the user to accept billing and make payment of a minimum \$50 user's fee per instance of use. Distribution is limited to paid subscribers.

Submissions of written material and graphics and photographs dealing with pyrotechnics or fineworks, related technologies or activities of, and information to the benefit of the members of the WPA, Inc. are gladly solicited. All submissions became the property of the Western Pyrotechnic. Association, ler, and may be edited or rejected for any reason and such material may not be returned. No payment is made for submissions.

1998 WPA OFFICERS



Tom Grace



Steve Wilson



Steve Rhoods



Sean Hale

President - Tom Grace Phone - (909) 591-8319 E-Mail: TRGRACEFX@aoi.com Northern California Vice President - Steve Wilson Phone - (707) 485-5122

E-Mail: pyrobert@saber.net Treasurer - none active Secretary - Steve Rhoads Phone - (909) 685-2968 E-Mail: remains4u@aol.com Publications VP - Sean Hale

Phone - (805) 297-1085 E-Mail:sean@pyrotechnics.org

Area Vice Presidents:

- Mark Devon Phone (408)725-0943 Northwest - John Childs Phone (206)531-1658 San Juaquin Area

- David Bogren Phone (209)529-1485 Los Angeles

 David Guccione Phone (714)738-1997 E-Mail:guccione@pacbell.net

San Diego - Larry Kasserman Phone (619)549-9556 Arizona Nevada - Mike Carter Phone (602)788-8259 Eastern and Forlegn - Bruce Blom Phone (740) 332-3202 E-Mail:MHKJ20A Rocky Mountains - Bruce Beck

Phone (801)359-0220

Skylighter, Inc.

Pyrotechnic Chemicals and Supplies

Chemicals

Acetone Aluminums: German Blackhead, Amer. Dark, Firefly, 10 others Aluminum Oxide Amber powder Ammonium Chloride Ammonium Dichromate Ammonium Perchiorate Antmony Trisulfide (2) Barium Carbonate Barlum Chlorate Barlum Chloride Barium Chromate Barium Nitrate Barium Sulfate Benzoic Acid Bismuth Triggide Bentonite clay Boric Acid Cab-o-Sil Calcium Carbonete Calcium Silicide Calcium Sulfate Charcoals: airfloat, 10, 20, 36, and 80 mesh Chlorowax CMC Copper(II) Carbonate Copper(I) Chloride Copper(II) Fluoride Copper Nitrate Copper(II) Oxide Copper Oxychioride

Cryolite

Dechlorane

Desiccent Dextrin Ferro-Titanium (3) Glisonite (Asphaltum) Graphite Grog Guanidine Nitrate Gums: Arabic, Copal, Guar, Tragacanth Hexachioroethane Hexamine Hydroxyethyl Cellulose Iron: dust, filings Iron Oxide: red, black Lactose Lampblack: standard, conductive Lead Tetracxide Litharge Lithium Nitrate Magnesium (7) Magnesium Carbonate Magnesium-Aluminum (6) Magnesium Carbonate Magnesium Oxide Manganese Dioxide Methanol Methylene Chloride Nitrocellulose: 5% & 25% Oxalic Acid Paris Green Parlon Pine Rosin Polyethylene powder Potassium Benzoate Potassium Chlorate

Potassium Dichromate Potassium Nitrate Potassium Perchlorate (2) Potassium Sutfate PVC Red Gum (Accroides) Rice hulls Rosin (Colophony) Salicylic Acid Saren resin Shellec Silicon powder Smoke dyes/mixes: blue, green, yellow Sodium Benzoate (2) Sodium Bicarbonate Sodium Nitrate Sodium Oxalate Sodium Salicylate Sod. Silicate/Waterglass Sodium Sulfate Stearic Acid Carbonate Strontium Chromate Strontium Nitrate Strontium Sulfate Sulfur Titanium: atomized fiake, sponge Titanium Dioxide Ultramarine Vinsal resin Wood meal Xylene. Zinc powder

Potassium Chromate

Zinc Oxide Zinc Stearate

Paper Products

Parallel tubes: 5/16'-2" Spiral tubes: 1/2"-3" End disks: 3/4"--5-1/2" End plugs & caps: 5/16"-2-5/6"

Plastic Prod's

Round plastic shells: 7/6'-8" # 5, # 100. Cylindrical shells Mortar bases: various

Other Products

Aluminum rammers

Books (50+)

Flax twine

ignition products: Visco, time fuse, quickmatch, Sticky Match** electric matches. electric match testers, quickmatch safety caps Polyethylene tubs: 8-196 oz. with lids Screens: brass or stainless: 10-100 mesh Star test guns, 5 barrel Star rolling cores Videos (18)

Free deliveries to Western Winterblast. Orders must be prepaid and received no later than February 1st, 1999, Call for catalog if you need one, or see our internet web site for latest listings, specials, and bulk items. Chemicals and supplies can be shipped anywhere in the world or picked up at our warehouse near Washington, DC.

Skylighter, Inc.

PO Box 480 Round Hill VA 20142-0480 USA Internet Site http://www.skylighter.com

(540) 554-4543 Fax (540) 554-2849 Email custservice@skylighter.com





It's Your Club - by Sean Hale

Well it looks like the WPA has made it through yet another year and is going strong. The club has battled many things the past couple of years including lawsuits and financial issues. At this time the club seems to be back on track and ready to start doing as much as it can for the membership. There are many ideas among the membership as well as the current officers for ways to make the WPA run smoother as well as insure the club is not only protected, but well organized in the future.

I am sure many of you may be reading this and thinking to yourself "what do I care what the club does." Most seem to be members so they can attend the Winter Blast and get a couple of newsletters. Not only that, many people don't even read the parts of the newsletter that talk about club business that is not directly related to them lighting fireworks. I know because in the past I have been one of those people and I know some of those people. Hey nothing wrong with joining the club to have a little fun every once in awhile, but keep in mind that the club will always need people behind the scenes making all these events happen for you. These people are the officers, the area VP's, the volunteers that help during Winter Blast and offer their services, and the fireworks companies that donate time and product to make our Winter Blast the second largest pyrotechnic convention in the US.

Sometimes I think back to when there was no WPA and wonder how pyro's around here got along and how they met others like them in the area. I also wonder how these pyro's got reliable information. Sure there were books and publications and there was also the PGI^o, but not everyone could travel great distances with fireworks or afford a week long trip like that. Not only that, but PGI membership is scattered all over the world. A close group of pyro enthusiasts that could gather locally was the dream of our founders. Back then, there was no internet for the general public like it is now, pyro's used to take risky trips to the desert to try out their creations. The risk was going to jail. It is easy to take an organization such as ours for granted when you lose site of the ways things used to be so long ago.

For the past 10 years I watched our club strive and grow. In the 8th year after being a bystander since day one, I decided to take an office and serve the club. I had realized how much the club meant to me and wanted to give something back. Having been an officer for 2 years, I can also see there is much involved with keeping this club alive. Now that I had the opportunity to serve the membership, I feel I will always be involved with this club in one way or another as long as the WPA or myself is alive. Now the word involvement can be a turn off for many, but it's not like that at all. Involvement can be as simple as coming to the business meeting and voting on club activities. Involvement can also mean just lending a helping hand at the blast, or just giving feedback and suggestions to the club.

The thing to remember here is that the club will always need new people to run it as the years go by. There is no constant group of people that run the club year after year, not even the founders of the WPA. The people that run the club are members that wish to keep the club alive and help it in any way they can. I would guess the main reason more people don't run for office is that they don't feel qualified and just wouldn't know what they had to do once they were in office. By the same token, people may not come to the business meeting because they feel that their presence at the meeting would not effect the club anyway. Just be sure and think about who the club is made up of before jumping

to these conclusions. What I have found when taking office was that at first I thought I would just print a newsletter and that was it. I was kind of blown away when I was at the first officers meeting and was being asked for my opinions on major club decisions. It was then that I realized the entire club was at the mercy of us 5 officers. Our roles as officers have specific duties, but our role as the board of directors, directly effects how the club functions for that year. If nobody had new ideas or made decisions or did a little leg work on things, the WPA would cease to exist. Like anything else that is new, an officer must learn the way the club operates, and then make the best decisions to run the club in the best way possible. In addition to good business sense, it seems that another requirement for being an officer is being computer literate. Our club now has increasing dependency on computers for just about all our activities. An electronic database in File Maker Pro keeps track of our membership roster and Winter Blast registration. I put the entire newsletter together on a Macintosh using Quark Xpress, Photoshop, and Illustrator. In addition I put the WPA web site together as well as keep it updated. The officers are in constant contact via E-mail, and the members are in contact via the WPA electronic mailing list. In this day of technology, a growing membership and workload calls for modern solutions.

Luckily for the club there are those who are willing to take office next year and move the club forward in a positive direction. If you are also a person that wishes to serve the club as an officer, then come to the business meeting and run for office. Although a lot is expected of a WPA officer, there are also many benefits. One such benefit is the \$590 officers stipend. Yes you heard right. In case you didn't know, each officer gets \$590 upon successful completion of 1 year in office. Another benefit is that you get to attend Winter Blast for free and even get your room paid for. One mistake that can be made is taking office when you really don't have the time to devote to the club. This is not a pleasure cruise. Things need to be taken care of, and in many cases, your the one who has to do it.

Some of the future plans for the club could be things like additional fireworks shoots, area meetings where the membership does fun things, automation of club business such as a club voice mail system. There are many other things we probably can and should do. I for one, would like us to have a membership packet that goes out to all new members that includes a copy of the by-laws, a membership card, a welcome letter, and maybe a pin or patch. I am not the only one who has suggested such a package. I guess the point I am making is that the club can always work towards new goals with motivated people in office who have the best interest of the membership in mind.

Steve Wilson will be giving a seminar called, "WPA, The next 10 years" at this Winter Blast. I would have to imagine he will be covering issues about the club's future and your involvement with it. If you care for the WPA at all, I would suggest attending this seminar as well as the business meeting. A common observation year after year is that very few Winter Blast attendees even show up at the business meeting. When you consider that the outcome of this club and it's activities are all pretty much based on that one single meeting, you can see that it is a VERY important gathering for the WPA. By not attending this, you are just along for the ride. We all can only hope that members continue to take involvement in the future of the WPA. Not only does your vote, suggestions, and opinions to the board and membership make a difference, you may even want to start preparing to run for office in the future. The best way to do that is to stay in contact with current WPA officers and observe the way the club is running. Whether you just vote, help out, or run for office, the future of the WPA is in your hands.





Officer Material

by Steve W. Wilson

The time is coming around once again to elect new officers for the WPA. In the last few years it has become exceedingly harder to find persons with "the right stuff" who are willing to be an officer in the WPA. I thought it might be useful to do a little analysis on what makes a good pyrotechnic club officer to see if we can't find some folks out there that might be up to the task. I'll be the first to admit that I am guilty of not living up to some standards set out below. Nonetheless, I hope others can benefit from both my successes and failures.

I seem to remember in the early years of the WPA (and few other clubs) that there was a lot more enthusiasm about the operation of the club. Having been one of the enthused in the past myself, I feel somewhat qualified to point out some criteria.

A good officer, for starters, needs to have time to burn (pardon the pun). Anyone who cannot give-up several hours a week to this organization has no business taking on the responsibility of leading the club. Our club has over 500 members, last I heard. That's a lot of pyro's who are entrusting the officers of a corporation to perform a required minimum number of duties throughout the year. The size and makeup of this organization also demands officers with some integrity and maturity.

Pyro builders who embrace their hobby with a passion tend to impart more enthusiasm and credence as an officer than those who might be categorized as "armchair pyro's". Those who are new to fireworks often have more energy to run with the ball than those who have been around the block a few times. Single pyro's with no kids are often more likely to make themselves accessible to the clubs needs than those married with many tots. Folks with a lot to lose (doctors, rich people, business owners) tend to shy away from taking on a position of responsibility. This is a principle I call "liability hysteria", It is difficult to convince some folks that they won't lose everything if the unimaginable ever happened. This is too bad because many of these folks might make excellent leaders otherwise. I've noticed that persons who work full-time in the fireworks industry become totally inaccessible around the 4th of July. I know that one year I worked at a display company and tried to do our newsletter at the same time. Didn't work out at all. After working with fireworks all day long, the last thing I wanted to do when I got home was to write and/or talk about fireworks. Leaders with good communication skills are essential in any organization. The more officers in a club that are capable of good communication savvy, the better off the club will be for that fiscal year. Teamwork. No "oneman shows". The Board of Directors needs to be able to work together as a team. They need to get along with each other and meet or talk with each other frequently.

The officers need to understand the purpose of the organization and be mindful of the needs of the membership. They need to acquaint themselves with the organization's bylaws and stay within their framework. The officers need to listen to what the members are saying. The officers also need to make sure they are listening to all of the members and not just a special interest group or tight group of friends. Lastly, a good officer must follow through with the tasks that he/she promises to do and not mislead his fellow officers that things are being taken care of, when in fact they aren't at all. A club becomes paralyzed when the treasury is inaccessible or the insurance or BATF licenses expires. A good officer needs to recognize his shortcomings, if any, and delegate crucial tasks to others if he cannot complete them himself.

These are most of the things that I feel are important for prospective officers to consider. Obviously, there are some specific circumstances that are fresh on my mind. But my purpose here is not to point fingers, rather to better prepare new leadership for our pyro club(s).

Sincerely,

Steve Wilson

Firefox Enterprises WESTERN WINTER BLAST 1999

Firefox is now taking orders for free delivery to Western Winter Blast.

We will have many specials at the trade show, so come in and see us in the class C tent.

Just in - Ammonium Perchlorate

90 micron down, superfines ground free flowing powder

Special!

50 lb busket \$2,00/lb 200 lb drum \$2,50/lb

50 lb bucket - \$3.00/lb. 200 lb drum - \$2.50/lb Order yours now for free delivery!

Fax or Voice • (208) 237-1976 • E-mail: firefox@pcaxxess.net



PO Box 5366 Pocatello, ID 83202



Formula of the Month Brilliant Deep Emerald Green Star

by - Anonymous Source

Barium Nitrate - 65
Parlon - 20
Magnalium (200 mesh flake) - 10
Red Gum - 5
Dextrin - 5

Bind with 25% isopropal alcohol in water. Cut or rolled.

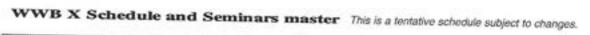
For a formula that looks dirt simple, it sure is a nice green. Give it a try.

Take Care,

- Anonymous Source







	I harriday February 11	Friday February 12	Saturday February 13	Sonday
Registration	12:00pm-9:00pm @ Shooting Site	9:00am-2:00pm @ Nautical Inn 4:00pm-8:00pm @ Shooting Site	9:00am-2:00pm @ Nautical Inn 4:00pm-8:00pm @ Shooting Site	NONE 14
Flut Murket	8:00am-4:00pm @ Nautical Inn	8:00am-4:00pm @ Nautical Inn	8:00am-4:00pm @	8:00am-4:00pm @
Chas C Vending	5:00pm-10:30pm @ Shooting Site	5:00pm-10:30pm @	5:00pm-10:00pm @	Nautical Inn 5:00pm-10:00pm @
Afterglow	Brew Pub	Shooting Site	Shooting Site	Shooting Site
	Mew Pub	Nautical Inn	11:00pm-1:00am @ Bonfire	11:00pm-1:00am @ Nautical Inn

Thursday February 11 5:00pm - 11:00pm	Nantical Inn Hotel	S.A.R.A. Park Shooting Site
Friday		Class B & C Open Shooting
February 12	Nautical Inn Hotel	S.A.R.A. Park Shooting Site
9:00am - 10:00am	Kick-Off Meeting (Everyone)	and the same of th
10:00am - 12:00pm	Display Operators Certification Course Part I, Lecture (Perigrin/Steinberg)	
12:00pm - 1:00pm	Lunch break/ClubCom Luncheon	
1:00pm - 5:00pm	Pancieon Pancieon	
		Display Operators Certification Course Part II
1:00pm - 1:50pm	Safety in Manufacturing (Hanson)	Course Part II
2:00pm - 2:50pm	Ohm, Ohm on the Range (Korbylo)	
2:00pm - 5:00pm	- Mary Child On the Range (Rorbylo)	20000000 00 000
		Public Display Slave Labor Workshop
3:00pm - 3:50pm	Magic Fire Broden I	Lance Work (Wilson, Dixon, Hanson
4:00pm - 4:50pm	Magic Fire Product Introduction	Pyro Golf (Lichtenwalter)
5:00pm - 6:00pm	36-inch Shell (last time this century)	Lampare - Balls of Fire (Lambert)
5:00pm - 11:00pm		Dinner/Barbecue
6:00pm - 8:00pm		Class B & C Open Shooting
- 0.00pm		Demos & Exhibitions

Saturday February 13	Nautical Inp Hotel	THE RESERVE OF THE PARTY OF THE
9:00am - 10:30am	WPA-The Next Ten Years	S.A.R.A. Park Shooting Site
11:00am - 12:00pm	Lessons Learned from Unusual Shooting Sites (Mattingly)	
10:00am - 10:30pm		Fuel, Tools and Techniques
		An Introduction to Rockets
10:30am - 12:00pm		Black Powder Rocket Workshop
12:00pm - 1:00pm	Lunch break	Diack Fowder Rocket Workshop
1:00pm - 3:00pm	Pyrocolor Harmony (Baechle/Veline)	3-inch Ball Shell Construction
1:00pm - 3:00pm		Whistle Rocket Workshop
2:00pm - 2:50pm		6-inch Ball Shell Construction
3:00pm - 5:00pm		Strobe Rocket Workshop
5:00pm - 5:15pm		Shed Buster (Rankin)
5:00pm - 6:00pm		Dinner/Barbeone
6:00pm - 8:00pm		Demos & Exhibitions
5:00pm - 10:30pm		Class B & C Open Shooting
8:00pm		MagicFire Display
9:00pm		Hand Fired Extravaganza
Sunday		Timid Filed Extravaganza
9:00am - 9:50am	Nautical Inn Hotel	S.A.R.A. Park Shooting Site
10:00am - 12:00pm	The Pyros in Spain Fallas Mainly	
10:00am - 12:00pm	WPA Business Meeting	Why aren't you at the business
12:00pm - 1:00pm	Attend or perish!	meeting? (Bill Page excepted)
1:00pm - 1:00pm 1:00pm - 2:50pm	Lunch break	1 (1 - C) - C - C - C - C - C - C - C - C -
3:00pm - 3:50pm		Shooter Certification - Part III
4:00pm - 4:50pm		Shooter Certification - Exam
5:00pm - 6:00pm		I Hear It, But I Don't See It! (Turds)
5:00pm - 8:00pm		Dinner/Barbecue
8:00pm - 9:30pm		Class C Only Open Shooting
9:30pm - 10:30pm		Public Display
Monday		Class C Only Open Shooting
February 15		THE RESIDENCE OF THE PROPERTY OF THE PARTY O
8:00am - 3:00pm	Nautical Inn Hotel	S.A.R.A. Park Shooting Site
		Tear down/Clean-up



An Experience in Japan that will never be forgotten - by Keath Nupul



Tachikawa in his store at the shopping mall.

It's been a well known fact to me that American pyrotechnic concepts and practices were based out of Italy. In my passion for aerial shells (explicitly perfect round and multi-petal breaks) and my lust for knowledge of the manufacturing of round shells, this would send me in one direction, Japan.

While making plans of things to do in Japan my mother-in-law informed us that she knew of a pyrotechnist, or in Japanese hanabishi, that we could talk to about fireworks.

After 20 minutes of riding the train from my mother-in-law's house, we arrived outside the shopping center where Tachikawa's store was located. We waited a while for Miki's mom to arrive, so that she could make the introduction. Once Kakuko, Miki's mom, had arrived we headed into the shopping center. Across from the shoe store and in-between the clothing shop and the Chinese restaurant was Tachikawa Dynamite and Fireworks Company. Sitting behind the counter of the shop was Master Tachikawa reading a newspaper. The shop was a clutter of pictures, stacks of paper, miscellaneous items from shell demos to demolitions, and lots of trinkets from his world travels. He invited us to sit at a small table at the back of the shop and offered us coffee, which we both accepted. He called for his son, Syozo, to run next door and get the coffee from the restaurant. After a few minutes, we began to learn that this was not just a small hanabishi but one of the masters of the art. We sat while he told us stories about his world travels. Whenever we would ask a question about pyrotechnics, he would dig into the stacks of paper and pull the information and sometimes even pictures, and we asked lots of questions. He told us that we should share the information with the American pyro's. Hours passed while we sat and talked, we are still indebted to Tachikawa for the time and information he has given us. At the end of our meeting he asked if I would like to come to a small show the next day and tape the setup and firing of a show in Japan, without hesitation I accepted.

So it was set, we were to meet him at the shop in the morning. Arriving at the shop
Tachikawa was to take us to the shooting site via taxi and had informed us that we were going
to make a few stops. A few stops later, we were at the Police Station where I was to meet the
head inspector. We went upstairs to the Inspectors Office, there I was prompted to have a
seat on the sofa with Tachikawa and the Inspector sitting across from us. The conversation
that took place was all in Japanese so I only got a few words, except when I heard passport I
would hand the Inspector my passport. At this point, Tachikawa pulled out copies of my
California pyrotechnic operator license and gave the Inspector copies for his files. After that
we set off to the shooting site.

Arriving at the site we headed to the main meeting area for the festival and city staff. At this point I was introduced to the city officials, with Tachikawa handing out copies of my California pyrotechnic operators license like a business card. I must admit it was a very strange experience. I was also in awe at the respect that Tachikawa received from all the people he met, from the taxi driver to the city officials. It was strange to be in a place where a pyrotechnician is held as a master and an artist instead of a mad bomber. After meeting a lot of really extraordinary people we headed down to meet the crew and see the setup.

The shooting site was a small barge in the middle of a reservoir. Due to the size of the fallout area, the largest shell was 7.5 cm, like a three-inch. The whole show would be fired from racks, and the racks would be hand lit. The gun racks were all made for Tachikawa to his stringent specifications (1). The racks were set up to a dual-bar fence, and then lashed with three two-inch cotton cargo wenches, top, middle and bottom. Pyrotechnic crews in Japan are the same as crews in the States, we laughed and had a great time while working. In Japan break time also equals smoking time (of course at the minimum safety distance).

For this show the technique used would be a set of six racks for the show and set of six racks called a starmine(finale). All the racks for the show would use a time-fuse based delay within each gun.





The lift bag was pre-connected to a piece of quick match which was then connected to the time-fuse that was cross-matched using a black power impregnated paper with a wire wrap (kind of like thermalite) and in-between that was a cap for the gun(so that no embers would fall into that gun while the show is going). They had these already setup in groups of 10 and numbered so the delay was preset. So to setup the rack all the crew had to do was drop the lift/fuse into each gun in the rack then lower a shell onto the lift bag with a set of tongs (Yes I did say tongs, ok everyone go to the BBQ store and get a pair) after that they'd drop a bag of loose stars into the gun and close the lid. Then after all the guns have their caps simply lay quickmatch across the crossmatches and twist.

In most cases the racks would have 20 guns, so they linked the two groups together with a long piece of timefuse. Cover each section with foil(note: the foil they used was paper on one side and foil on the other) and then cover with a fire-proof tarp. Two or three racks would get covered

with one tarp. The starmines were setup as a chained set. The lift bag was attached to a section of quick match and lowered into the guns, then the shells were placed into the gun and atop that was more bags of stars. The total setup time was only one hour, thirty minutes for 250 shells. During setup Syozo asked me if I was ready to fire the show, with a moment of reflection on the words he said, I asked Miki to reconfirm in Japanese.

Now that setup was done we had time to talk to the crew and get to know each of them, in the proverbial pyro wait. After a while it was our turn to go get some food for dinner and see the Bon Festival, we headed off with Syozo and his wife to a restaurant outside of the festival.

Returning to the shooting site it was time to get started to learn the techniques that we would use out on the barge. First the fusee was a click start propane torch. And the sequence



would be for one person to pull the tarp back from the rack then the one with the fusee to pull the quickmatch out and light it. While that person is lighting the match one other person stands by with a broom to sweep any embers off of the fusee. After the rack is lit, all crew would tend to sweeping off any embers that would land on the tarps. Since my Japanese was very poor the signal to light the rack would be, my sensei(teacher) Sabu, to hit me on the shoulder and say





TENKA(FIRE), this worked well in practice.

At the trucks we dawned our happi (Japanese craftsman jacket), helmets and goggles. We hopped over the fence and started walking out to the barge. Once at the barge we prepared to fire, tested the torches and checked the racks one last time before shooting. We had only had a short time for a last photo opportunity, so we all lined up for the cameras (and made strange poses).



When it came time to fire the

show, the team on the other side of the barge was up first.

With an instant flash, the first thing to go was a starmine(ten shells all chained to fire at the same moment), at that point the little 15 by 30 foot barge rocked to one side. Then it was my turn to light, they pulled the tarp off of the rack, I pulled the quick match from its cover, and waited for the signal. Just as we had practiced (more the Japanese words then the action) Sabu whacked me across the shoulder and yelled TENKA, and I lit the match. A fast flash from the rack and, NOTHING, with a moment of shame that seemed to last forever, the time fuse hit the first shell and started the show. We crossed over to the opposite side of the barge to watch as one shell lifted after another, with the barge enhancing each and every shot. While the rack was firing we swept the falling embers from the unfired racks. Then we waited for a few moments and the team on the other side of the barge fired a starmine. Again a pause and we lit our next rack, and so it went for about 20 min. Nearing the end of the show all my new found pyro brothers asked me to light the last rack. After the show, we started picking up the scraps of paper and foil, while waiting for the guns to cool down. Then we unstrapped all the racks and stacked them in the middle of the barge. The crew then started to wash each and every gun with water and a brush. All the guns that we used on that show were sparkling clean, not one gun was missed. Finishing cleanup we waited at the cars for the crowd to clear and talked. We had a great time hanging out with the crew and found that wherever we go, pyro is the one link that can pass any language and cultural barriers.



1) 7.5 cm steel guns which were cut down one side and then welded (this is to add a weakness, so if a shell goes off in the gun and the gun fails, the blast will go in a known direction), then a domed end plug is welded into place (the amount of pressure this can withstand is exponential compared to the flat end plugs). The guns were then welded to two U shaped guides, with the top U facing in and the bottom facing out, then reversed on the opposite side (this would help when setting up to get the proper orientation of the

guns). With the welds staggered as to not point at the fusee or at other guns. For this size he called for 5 guns to be mounted in each rack.

Notes From The President:

The Winterblast is just around the corner and by now should have all your arrangements made for Hotel and Travel. For those of you who have not registered yet, do not mail any registration materials. There will be on site registration at the convention. As you can see by the schedule in this issue, we have lots of things planned as well as some very interesting seminars. I hope that if you had not planned to attend that maybe we changed your mind. It really is going to be a great weekend! Lots of past members who have not attended a Winterblast for some years are going to be joining us for our 10th anniversary celebration, and Bill Page has some great things in store for our sights on Sunday night.

In addition to having lots of fun and seeing old friends,we as a club take care of the annual business At this convention. I would please ask that as many members as possible attend our business meeting on Sunday morning. There will be some officers positions that have become available and we need to fill these, as well as take care of club business past and present.

It has been my pleasure planning this 10th anniversary convention along with the many volunteers of the convention team as well as serving as your President. I would also like to thank the many corporate sponsors who have donated their products and services to us to help make our convention a success, not to mention all those individuals who have put in many hours helping to pull things together. I look forward to seeing you all in Lake Havasu next weekend.

Thomas Grace WPA President WWB10 Convention Chairman

Pyro Golf at the Blast

- by Guy Lichtenwalter

Just when you were thinking that Pyrogolf had been hit into a sand trap, it has come back, by popular demand. To those of you unfamiliar with this activity, the concept is to test the shell lift lifting capability of homemade black powder, by shooting a golf ball into the air and timing the total flight time. The longer the ball is in the air, the faster the powder, I first shot golf balls out of a mortar about 5 years ago, while teaching a class at the WWB, on making homemade BP. Since then, we have used this method, at several PGI conventions, to determine the lift quality of homemade BP.

Unlike the Pyrogolf events held at the PGI conventions, this year it will be a scheduled event at the upcoming WWB. So, if you will be attending the WWB and have some homemade BP that you would like to compare to other homemade BP's, then bring it along. The objective is to prove that homemade BP can perform as well (or better), than commercial GOEX BP. This is a good time to test BP made with different types of charcoal.

The BP should be made from KNO3, S and Charcoal. No chlorates or perchlorates. We will screen the powders so that the grains pass through an 8 mesh screen, but catch on a 12 mesh. Grains can be made by pressing the powder and then breaking into pieces, or possibly by wetting and pressing through a screen.

It looks like this event will take place on Fri morning, in the center of the race oval. I will need "helpers" who can screen, weigh, label, shoot and time. The Fri AM schedule might change. So, if you have some homemade BP that you would like to test, then bring it along. If you just want to see a bunch of pyro's chasing golf balls in the desert, then attend as a spectator.





Iowa Pyro Supply

- FREE DELIVERY TO WINTER BLAST -

Please call by February 4' 99.

Large supply of Aluminum granular
50-150 mesh- 25lbs./\$4.00 lb., 50lbs./\$3.50 lb.
Larger quantities call for special or drum pricing.
Spherical Titanium

\$6.00/lb. 25lbs and up \$3.00/lb.

For current price list send SASE to:

lowa Pyro Supply 1000 130th St. Stanwood, IA 52337

•Phone-319-945-6637. Fax-319-945-0007 • E-mail-iowapyro@netins.net.

•Web Site: http://www.netins.net/shawcase/iowapyrosup/

FREE DELIVERY TO WESTERN WINTER BLAST!

Class C (1.4G) orders taken until February 1.

Need a lot of one item? -- Order early. (Early orders get special discount.

Gary Lillich Flash! Fireworks Office (316)788-5801 FAX (316) 788-5869 14 Madapalla Ct. Derby, KS 67037-9516 Warehouse (785)734-2464 Warehouse FAX 734-2299

E-mail: "flashm@cxo.com" or "flashmarket@usfarm.net"

WPA Jackets

Be the first on your block to be hip and cool with these black satin WPA jackets. The back has 6 color embroidery of shall bursts, and the front has your name embroidered in gold. The base price of the Jackets are \$59.50. Since these jackets are made special, a minimum of six jackets need to be ordered before we can have them made. If you are interested, call Forrest Rhoads at (714) 640-5395.

Or send check or money order to: Forrest Rhoeds 2230 Araila St, Newport Beach CA 92660

Make check or money order payable to: Western Pyrotechnic Association. Additional charges are as follows: Your name stitched on front - add \$2.50 XX size - add \$2.50 XXX size- add \$4.00 Please add \$4.00 for shipping per jacket ordered.



WPA Mailing List and Web Site

We are proud to announce that the WPA mailing list is up and running. The mailing list I am referring to is an electronic mailing list. Basically that means that anybody in the WPA who as something to say, can post it to the list via E-Mail. To join the list, E-mail a request to join to: sean@pvrotechnics.org.

There are two ways to join. Joining as "list" means you receive messages as they come in. Joining as "digest" means you get one compilation of all the messages at the end of the day. Please specify which you want (or both) when requesting to join the WPA mailing list. The mailing list will be open to WPA members and a few representatives from other pyrotechnic organizations. In addition we have a web site. Check it out for WPA and Winter Blast info as well as downloading forms. The web site is located at: http://wpa.pyrotechnics.org/



Get the WWB IX main show tape.. only \$15.00

send Check or money order to: Proimages Networking P.o. Box 9088 Canoga Park, Ca. 91309 For Visa or MasterCard orders call: 818-993-6173



PROIMAGES NETWORKING

Offers a Wide range of internet services to help your real world business meet the internet...

Get a national 56k Dialup Account for \$12.95

E-mail services for \$4 (includes yourname@pyrotechincs.org)
 Web Application programming and Web Page Design

For more information Contact keath at 818-993-6173 or e-mail at keath@proimages.net

Check out http://www.proimages.net/

WPA Special. WPA members get Dial up and E-mail for \$14.95 per month



