

2023 WPA WinterBlast Sessions

Wednesday, February 15th, 2023

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Site Setup	09:00 AM - 05:00 PM	WWB Staff	Sara Park	Social	Confirmed	
# 1						

Thursday, February 16th, 2023

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Winterblast Registration (Pre-Registered & Walk-In)	08:30 AM - 12:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
B-Mag Open	10:00 AM - 03:00 PM	Security Staff	Container	Shooting	Confirmed	
Trade Show	10:00 AM - 04:00 PM	WWB Vendors	Sara Park	Vendor	Confirmed	
Pressed Stars, Comets and Color Changing Stars Tutorial	10:00 - 11:00 AM	Ben Smith	Tent 3	Seminar	Tentative	This seminar will detail the general techniques, hints, and tips of working with star plates, color-changing insert plates, and comet pumps. Formula, guidelines, and shop safety will all be covered. Though this class will use the FireSmith line of star plates, color-changing pressed star plates and multi-comet pumps, the basic techniques, and safety guidelines are applicable to just about any pressed star construction method. New this year, the presentation will also cover the production of color-changing pressed stars and color to report pressed stars. This class is a mandatory prerequisite for anyone doing the Pressed Star Workshop that follows in the same location for the rest of the day.
Pressed Star Workshop	11:00 AM - 02:00 PM	Clara Carstensen, Danny Dutra	Tent 3	Workshop	Confirmed	In this workshop we will use two FireSmith hydraulic presses, along with star plate sets in several medium sizes to do some limited production of stars and comets for any members who sign up for the class or bring over their own comps to process. The presses will remain in Tent 3 for the remainder of the day should someone wish to come back and press out additional materials. Everyone who uses this workshop MUST attend the seminar on pressed stars and comets that proceeds it - NO EXCEPTIONS! Go to the Workshops link to sign up and pay for this class. You will also need to sign up for a specific time slot. We cannot process everyone at the same time for equipment and safety reasons.
Public Display Workshop - Part I	01:00 - 03:00 PM	Monty Gill, Monica Blam	Crash Camp	Workshop	Confirmed	Crash Course Pyrotechnics is Monty Gill and Monica Blam. So you want to work on a public display? Well, call your local fireworks company a few weeks before Independence Day, they will put you to work... Or, sign up for this workshop and work with professional pyrotechnicians. Learn how to safely plan, build props, prepare products, fuse, wire, and teardown a show. Most people get paid to do this kind of work, but not us! Sign up for this multi-session workshop and learn from professional pyrotechnicians. We'll teach basic show preparation and some extras: building mines, props, and placing products built by other member workshops. We will shoot what we've built along with other contributions and purchased products in a choreographed display.
Winterblast Registration (Pre-Registered & Walk-In)	01:00 - 06:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
Seminar Prep - Fusing & lift sub-assembly (for ball shells & mines)	01:00 - 04:00 PM	Seminar Staff	Tent 2	Workshop	Confirmed	All those seminars and workshops take a lot of supplies that need to be prepared so you can enjoy your week. Get your hands dirty with some of the preparation work such as cutting quick match, visco or timefuse. Time fuse needs to be cross-matched and black powder lift needs to be weighed out. The exact requirements vary from year to year.
Spolettes and Precision Timing Elements	02:00 - 03:00 PM	Joseph Madziarczyk	Tent 1	Seminar	Confirmed	Time, Timing and Precision Timing, what does this all mean? This seminar will focus on the making of precision spolettes and the methodologies for making precision time fuse elements. Including the various pit falls trying to make them. Followed by a discussion of when precision timing elements are essential.

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Basics of Fireworks Chemistry	03:00 - 04:00 PM	Dominykas Juknelevičius	Tent 1	Seminar	Tentative	All fireworks are made using a wide range of chemicals. Knowing what chemicals do what, and devising formulation for all of the various effects is a fascinating field to study and work with. In this seminar, taught by one of Europe's top young pyro chemists, will go over the essentials including oxidizers, fuels, modifiers for color and sound, as well as binding strategies for most common fireworks compounds. Attendees will come away with a good foundation of pyro chemistry theory and some tried and true formulas.
Welcome Orientation Meeting	04:00 - 04:30 PM	WWB Staff	Bleachers	Meeting	Confirmed	
Open WASP Workshop	04:00 - 06:30 PM	WASP Staff	Tent 2 (Rear)	Workshop	Confirmed	
Safety Training (How to be a Safety Volunteer)	04:30 - 05:00 PM	Darrell Fiss, Greg Dandurand	Hospitality Tent	Safety	Confirmed	The WPA and WWB is run by volunteers and you are encouraged to volunteer for as many things as you can. The Safety Volunteer area in particular needs to be fully staffed or the shooting lines shut down until they are staffed. You can be a Safety Volunteer with just a few minutes of training. It's not difficult, can be done by anyone who is willing and is a great way to meet other club members. Greg and Darrell will make sure you are comfortable with being a Safety Volunteer.
IGNITE Firing Systems – Start Shooting Fireworks with your Phone!	04:30 - 05:30 PM; 07:30 - 08:00 PM	Zach Gilbert	Tent 1	Demonstration	Tentative	Stop lighting fireworks by hand and check out the IGNITE Firing System Smartphone enabled firing system. During this session Zach from IGNITE Firing Systems will start in Tent 1 with the Visual part, then we will move out to the field and demo how the IGNITE system works allowing you to and your family to fire fireworks this 4th more safely! Attendees will have an opportunity to use the system to fire some Class C and proximate pyro with a tablet or smartphone. Part 2 of this demo will occur in the shooting of some 1.4 products starting at 7:30PM in the grandstands and on the field.
Class C Vending	05:00 - 09:30 PM	WWB Vendors	Class-C Tent	Vendor	Confirmed	
B-Mag Open	05:00 - 10:00 PM	Security Staff	Container			
Class B Safety Class (How to safely fire your shells)	05:00 - 06:00 PM	Darrell Fiss, Greg Dandurand	Safety tent	Safety	Confirmed	To light your product on the B-line you need a sticker on your badge. That sticker tells the line Safety that you are qualified to light your product. Attend this quick seminar and learn how to safely conduct yourself out on the B-line. Each participant will light one B product under the watchful eye of a trained professional (well, mostly). When he is satisfied that you will be safe then you will get a sticker on your badge.
2nd Welcome Orientation Meeting (if missed the 4:00 time)	06:00 - 06:30 PM	WWB Staff	Hospitality Tent	Meeting	Confirmed	
Open Shooting (No salutes after 9PM!)	06:00 - 10:00 PM	Safety Staff				
Round Eyes Fireworks Class C Demo	07:30 - 08:00 PM	Round Eyes Fireworks	Race Track	Display	Confirmed	A Demo of Class C on the racetrack
Hauter Fireworks Class C Demo	08:00 - 08:30 PM	Hauter Fireworks	Race Track	Display	Confirmed	A Demo of Class C products for sale in the C tent with descriptions.
Afterglow	10:00 PM - 02:00 AM	WWB Staff	Quality Inn	Social	Confirmed	

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Winterblast Registration (Pre-Registered & Walk-In)	08:30 AM - 12:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
Public Display Workshop - Part II	09:00 AM - 12:00 PM	Monica Blam, Monty Gill	Crash Camp	Workshop	Tentative	Crash Course Pyrotechnics is Monty Gill and Monica Blam. So you want to work on a public display? Well, call your local fireworks company a few weeks before Independence Day, they will put you to work... Or, sign up for this workshop and work with professional pyrotechnicians. Learn how to safely plan, build props, prepare products, fuse, wire, and teardown a show. Most people get paid to do this kind of work, but not us! Sign up for this multi-session workshop and learn from professional pyrotechnicians. We'll teach basic show preparation and some extras: building mines, props, and placing products built by other member workshops. We will shoot what we've built along with other contributions and purchased products in a choreographed display.
New Member Orientation	09:00 - 09:30 AM	Dennis Miele, Greg Dandurand	Hospitality Tent	Meeting	Confirmed	New to the WPA or first time at Western Winter Blast? This seminar is just for you. Attendees will be given a brief history of the WPA, an overview of our policies and safety procedures. Time will be given for individual questions and answers followed by a guided site tour of the WWB site given by some of our current officers and key staff personnel. Get the lay of the land in the sunlight!
Introduction to Black Powder Rockets	09:00 - 10:00 AM	Kurt Medlin, Mason Jensen, Scott Morton, Steve Majdali	Tent 2	Seminar	Confirmed	Lecture portion - This workshop on traditional black powder rockets is a perennial favorite at Winter Blast. We will demonstrate how to make a "one-pound" black powder rocket. Starting with a few simple tools, a tube, some clay, a few ounces of black powder composition, and a stick, they will explain all the elements that go into making a successful rocket as they demonstrate the technique. Attendees will then have a chance to make their own rocket in the workshop portion which they can fire that night. A materials fee will be charged per student.
6" Double Petal Ball Shell Workshop - Part I	09:00 AM - 12:30 PM	Ellen Webb, Cliff Pearson	Tent 3	Workshop	Confirmed	In this hands-on workshop participants will build 6" round double petal chrysanthemum shells. Using the traditional Japanese method, the inner petal will be formed with only black powder-coated rice hulls and tissue paper. It is recommended that participants have some shell-building experience beforehand. The 5" Ball Shell workshop, for instance, would provide an excellent background.
Walking Tour Shooter Lines (Meet at entrance to firing lines)	09:30 - 10:00 AM	Greg Dandurand	B-Line	Safety	Confirmed	This walking tour gives participants a look behind the scenes not normally afforded to the public. If you plan to do open shooting in the evening but haven't been out on the firing lines this orientation is perfect for you to attend. During this walk, we will go to the various WWB firing sites at SARA Park. Doing this during the daylight will certainly help you navigate the rocks, stones, pebbles, dips, and washes off the back area where the shooting lines are located. We will discuss how to be a Safety, and how to make the Safeties happy (and everyone safer) when you bring your live product in during open shooting
Pyros In Training Kickoff	09:30 - 10:00 AM	Bill Stevenson, PIT Crew Staff	PIT Tent	PIT Crew	Confirmed	Pyros in Training (PIT) is a seminar and workshop series targeted at families and youth members, but is open to anyone who wants to learn about the basic science and techniques involved in pyrotechnics. In this kickoff session, we will go over program details and schedule for the weekend and get started on planning our display.
How to Obtain Your CA Pyro Operator's License	09:30 - 11:00 AM	Mike Tockstein	Tent 1	Seminar	Confirmed	"How to Obtain Your CA Pyro Operator's License" : Focusing on safety, training, and professionalism, Mike will provide an overview on the process to become a licensed Professional Pyrotechnician around the country, and do a deep dive into the particulars of California. Not only will you learn to navigate pyro operator laws, but also be given some gold nuggets from lessons learned, guidance on interactions with the fire authority, along with training resources that will be identified to advance your expertise. Learn how to effectively run a crew, especially those new (or newer) to the world of pyrotechnics, including a free online standardized training program. Learn of immediate opportunities to crew displays and the steps to work towards your license in California. Want to obtain your license by this 4th of July? Attend this seminar and we will help make it happen!
B-Mag Open	10:00 AM - 03:00 PM	Security Staff	B-Line	Shooting	Confirmed	
Safety First	10:00 - 11:00 AM	Bill Stevenson, PIT Crew Staff	PIT Tent	PIT Crew	Confirmed	New this year, PIT will be working with items like black powder, stars, mines, drivers, and fountains. This seminar delivers important safety information and includes a certification test required for youth attendees to work with energetic materials at Winter Blast.
Trade Show	10:00 AM - 04:00 PM	WWB Vendors	Sara Park	Vendor	Confirmed	
Black Powder Rockets Workshop - Group 1	10:30 - 11:00 AM	Scott Morton, Mason Jensen, Kurt Medlin, Steve Majdali	Tent 2	Workshop	Confirmed	This workshop on traditional black powder rockets is a perennial favorite at Winter Blast. We will demonstrate how to make a "one-pound" black powder rocket. Starting with a few simple tools, a tube, some clay, a few ounces of black powder composition, and a stick, they will explain all the elements that go into making a successful rocket as they demonstrate the technique. Attendees will then have a chance to make their own rocket which they can fire that night. A materials fee will be charged per student. 'Introduction to Black Powder Rockets' is a required prerequisite.

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Mines for Beginners	11:00 AM - 12:30 PM	Tom Sklebar, Bill Stevenson, PIT Crew Staff	PIT Tent	PIT Crew	Confirmed	In this seminar, PIT participants will learn about and construct mines to take to the C line or to incorporate into Sunday night's display.
World's Largest Firework - A Passfire Documentary Video	11:00 AM - 12:00 PM	Jesse Veverka	Tent 1	Seminar	Confirmed	Come join Jesse Veverka and the Passfire Team for the 54 minute version of the World's Largest Firework, the documentary about building and successfully launching the current Guinness World-Record Largest Aerial Firework, a 62" (157.5 cm) shell weighing 2,797 pounds (1271 KG), in Steamboat Springs, CO, USA. The film features WPA members Jim Widmann and Eric Krug, both also presenting seminars here at Winter Blast. You can find the 90-minute version of the documentary on the Veverka Bros. most recent DVD, Passfire: Maximum Load.
Black Powder Rockets Workshop - Group 2	11:00 - 11:30 AM	Scott Morton, Mason Jensen, Kurt Medlin, Steve Majdali	Tent 2	Workshop	Confirmed	This workshop on traditional black powder rockets is a perennial favorite at Winter Blast. We will demonstrate how to make a "one-pound" black powder rocket. Starting with a few simple tools, a tube, some clay, a few ounces of black powder composition, and a stick, they will explain all the elements that go into making a successful rocket as they demonstrate the technique. Attendees will then have a chance to make their own rocket which they can fire that night. A materials fee will be charged per student. 'Introduction to Black Powder Rockets' is a required prerequisite.
Fire Extinguishers - Various Types and How to Use Them	11:30 AM - 12:30 PM	Antonio Restivo	Member Bleachers	Seminar	Confirmed	Fire Safety is EVERYONES responsibility and as professionals in the business we should know what to do in case of an emergency. This class includes a fun tutorial of many different types of fire extinguishers and the uses and types of fire, to actually starting a small fire where each student has to perform PASS (Pull Aim Squeeze Sweep) and put it out. Basic skills learned in this fire safety class will stay with you the rest of your life.
Black Powder Rockets Workshop - Group 3	11:30 AM - 12:00 PM	Scott Morton, Mason Jensen, Kurt Medlin, Steve Majdali	Tent 2	Workshop	Confirmed	This workshop on traditional black powder rockets is a perennial favorite at Winter Blast. We will demonstrate how to make a "one-pound" black powder rocket. Starting with a few simple tools, a tube, some clay, a few ounces of black powder composition, and a stick, they will explain all the elements that go into making a successful rocket as they demonstrate the technique. Attendees will then have a chance to make their own rocket which they can fire that night. A materials fee will be charged per student. 'Introduction to Black Powder Rockets' is a required prerequisite.
Introduction to Ball Shells	12:00 - 01:00 PM	Mike Garrett, Jim Widmann	Tent 1	Seminar	Confirmed	Lecture session - Have you ever wanted to build a round ball shells? Then this workshop is a good place to start. This workshop will teach you how to make your own 5" paper ball shell. Working with experienced shell builders, you will get hands-on knowledge that will guide you in building a ball shell that looks and performs just like the pros. There are three workshop parts: The first part, 'Introduction to Ball Shells', has a tutorial, demonstration and Q&A. That is followed by Part II for the assembly and wrapping of your shell. A fleet of WASP machines will be used to expedite this procedure. The shell is then dried overnight. On the following day, in the third session, you will apply the lift and leader to the shell. Your shell can be fired that night on the B-line in a special area just for us. 'Introduction to Ball Shells' is available free to everyone but is a required prerequisite for the Ball Shell workshops
Black Powder Rockets Workshop - Group 4	12:00 - 12:30 PM	Scott Morton, Mason Jensen, Kurt Medlin, Steve Majdali	Tent 2	Workshop	Confirmed	This workshop on traditional black powder rockets is a perennial favorite at Winter Blast. We will demonstrate how to make a "one-pound" black powder rocket. Starting with a few simple tools, a tube, some clay, a few ounces of black powder composition, and a stick, they will explain all the elements that go into making a successful rocket as they demonstrate the technique. Attendees will then have a chance to make their own rocket which they can fire that night. A materials fee will be charged per student. 'Introduction to Black Powder Rockets' is a required prerequisite.
Black Powder Rockets Workshop - Group 5	12:30 - 01:00 PM	Scott Morton, Mason Jensen, Kurt Medlin, Steve Majdali	Tent 2	Workshop	Confirmed	This workshop on traditional black powder rockets is a perennial favorite at Winter Blast. We will demonstrate how to make a "one-pound" black powder rocket. Starting with a few simple tools, a tube, some clay, a few ounces of black powder composition, and a stick, they will explain all the elements that go into making a successful rocket as they demonstrate the technique. Attendees will then have a chance to make their own rocket which they can fire that night. A materials fee will be charged per student. 'Introduction to Black Powder Rockets' is a required prerequisite.
Death Defying Sanding Dust Fireballs Workshop	01:00 - 04:00 PM	The Jackalopes	J-Line	Workshop	Confirmed	Have you ever wanted to find out how big of a fireball you can make with 5 gallons of extra fine sanding dust? Now is your chance to participate, collaborate and self-incriminate yourself with the madness of the J-line. This seminar will explore the technical details of the construction of a functional basic sawdust mine, sawdust mine with various pyro enhancements and finally how to pack a 55 gallon drum with black powder, 3" shells and sanding dust and live to tell about it! Participants will be able to assemble a 5 gallon sawdust mine and either shoot it at the conclusion of the seminar (if conditions allow) or return later in the dark hours and light up the night sky. For those interested in doing one for the evening, during the seminar you will be assembling a rapid deployment kit consisting of lift, fuse, lift liner paper and prepared pyro inserts. We will finalize the assembly right before lift-off time. This is for safety concerns since we really don't want a bunch of these things sitting around. Note: We can be a bit more adventurous with the ones getting lit during night time. Participation limitations: There is only so much sanding dust we can transport to Havasu so we will only be able to make 25 mines. Fee: \$10 collected onsite Safety: Eye protection required during seminar. Eye protection, hardhat and protective clothing for daylight shooting. Night time shooting - You will be in Jackalope Gulch so of course you will need all the usual B-line safety gear.

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Winterblast Registration (Pre-Registered & Walk-In)	01:00 - 06:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
"Feeling" the Light – "Seeing" Fireworks Displays Without Sight	01:00 - 02:00 PM	Collin van Uchelen	Tent 1	Seminar	Confirmed	How can the artistry of fireworks be made accessible to people with sight-loss? This interactive seminar explores multiple options. Drawing on my own experience in the pyrotechnical arts while becoming blind, I will present techniques for translating the visual appearance of fireworks into non-visual forms. Participants will learn how words, sounds, and touch can translate light across senses to make the movement and color of fireworks accessible without needing eyesight. I will provide examples from my own exploration of pyro-musical display design. On a broader level, this seminar also invites participants to consider how the low vision/blind community can be meaningfully included in public events featuring fireworks displays.
3" Mine Production Workshop	01:00 - 03:00 PM	Steve Wilson	Tent 3	Workshop	Tentative	In this workshop, participants will learn the "piston" method for making mines. We will then work exclusively on a build order of mines for the Saturday evening display by Crash Course Pyrotechnics. Multiples of several star mine designs will be built, eMatched and readied for loading in the display.
Hand Fountains for Beginners	01:30 - 03:00 PM	Peggy Purner, Bill Stevenson	PIT Tent	PIT Crew	Confirmed	In this seminar you'll learn how to roll a hand fountain using simple supplies that you can take to the C line to enjoy.
Magnesium Rich Red Flame Mixtures	02:00 - 03:00 PM	Dominykas Juknelevičius	Tent 1	Seminar	Confirmed	An effective, but still not well-explored area of red flare pyrotechnic formulations was investigated using scientific methods. High magnesium content (40–60% w.t.) and the presence of conventional gas generating materials were the specific features of the investigated formulations. Such illuminant compositions possessed a low burning rate and high specific luminous intensity. Additives in the form of 2-cyanoguanidine, Melamine, Azodicarbonamide, Calcium resinate, Shellac, Strontium oxalate, Lactose, Dextrin, Phenolic resin, Lignin sulfonate, 5-aminotetrazole, Urea, Guanidinium nitrate (GN), Hexamine and Sulfur were evaluated as additives.
5" Ball Shell Workshop - Part I, Group 1	02:00 - 02:30 PM	Mike Garrett, Jim Widmann, Tom Sklebar	Tent 2	Workshop	Confirmed	Have you ever wanted to build a round ball shells? Then this workshop is a good place to start. This workshop will teach you how to make your own 5" paper ball shell. Working with experienced shell builders, you will get hands-on knowledge that will guide you in building a ball shell that looks and performs just like the pros. There are three workshop parts: The first part, 'Introduction to Ball Shells', has a tutorial, demonstration and Q&A. That is followed by Part II for the assembly and wrapping of your shell. A fleet of WASP machines will be used to expedite this procedure. The shell is then dried overnight. On the following day, in the third session, you will apply the lift and leader to the shell. Your shell can be fired that night on the B-line in a special area just for us.
5" Ball Shell Workshop - Part I, Group 2	02:30 - 03:00 PM	Mike Garrett, Jim Widmann, Tom Sklebar	Tent 2	Workshop	Confirmed	Have you ever wanted to build a round ball shells? Then this workshop is a good place to start. This workshop will teach you how to make your own 5" paper ball shell. Working with experienced shell builders, you will get hands-on knowledge that will guide you in building a ball shell that looks and performs just like the pros. There are three workshop parts: The first part, 'Introduction to Ball Shells', has a tutorial, demonstration and Q&A. That is followed by Part II for the assembly and wrapping of your shell. A fleet of WASP machines will be used to expedite this procedure. The shell is then dried overnight. On the following day, in the third session, you will apply the lift and leader to the shell. Your shell can be fired that night on the B-line in a special area just for us.
PIT Display Planning	03:00 - 05:00 PM	Dave Tanner, Bill Stevenson	PIT Tent	PIT Crew	Confirmed	In this kickoff meeting, we'll inventory donated product and work out the basic goals and choreography for Sunday night's display.
Pyrotography - How to set up to take killer fireworks photos	03:00 - 04:00 PM	Tom Calderwood	Tent 1	Seminar	Confirmed	Photographing fireworks with a digital camera is a challenge. Tom is an accomplished fireworks photographer who will give many tips during this seminar for getting that "perfect" fireworks picture. The class discussion will include camera and related equipment use, camera settings, computer processing, and setup locations. Tom has a no-secret policy and is more than willing to share if you want to catch him later. He has a passion for the beauty that fire has, and is ever in pursuit of getting better in his craft.
5" Ball Shell Workshop - Part I, Group 3	03:00 - 03:30 PM	Mike Garrett, Jim Widmann, Tom Sklebar	Tent 2	Workshop	Confirmed	Have you ever wanted to build a round ball shells? Then this workshop is a good place to start. This workshop will teach you how to make your own 5" paper ball shell. Working with experienced shell builders, you will get hands-on knowledge that will guide you in building a ball shell that looks and performs just like the pros. There are three workshop parts: The first part, 'Introduction to Ball Shells', has a tutorial, demonstration and Q&A. That is followed by Part II for the assembly and wrapping of your shell. A fleet of WASP machines will be used to expedite this procedure. The shell is then dried overnight. On the following day, in the third session, you will apply the lift and leader to the shell. Your shell can be fired that night on the B-line in a special area just for us.

Topic/Activity	Time	Presented By	Location	Category	Status	Description
5" Ball Shell Workshop - Part I, Group 4	03:30 - 04:00 PM	Mike Garrett, Jim Widmann, Tom Sklebar	Tent 2	Workshop	Confirmed	Have you ever wanted to build a round ball shells? Then this workshop is a good place to start. This workshop will teach you how to make your own 5" paper ball shell. Working with experienced shell builders, you will get hands-on knowledge that will guide you in building a ball shell that looks and performs just like the pros. There are three workshop parts: The first part, 'Introduction to Ball Shells', has a tutorial, demonstration and Q&A. That is followed by Part II for the assembly and wrapping of your shell. A fleet of WASP machines will be used to expedite this procedure. The shell is then dried overnight. On the following day, in the third session, you will apply the lift and leader to the shell. Your shell can be fired that night on the B-line in a special area just for us.
Binary Airburst and SPD (Spark Producing Device) Assembly Workshop	03:30 - 05:00 PM	Amanda Nixon	Tent 3	Workshop	Confirmed	Amanda, assisted by Gayle Bates from Fireworks and Stage Fx America and Charlie Holdaway from Holatron Wireless Firing Systems, will demonstrate and help each participant assemble six different kinds of Spark Producing Devices (SPDs) and Airburst. The almost lost art of rolling flash paper airburst capsules will be one of these. As shows now use premade airburst to save set up time, fewer technicians work with binary flash powders and the old techniques are not being passed down to the younger generation. We will not be manufacturing flash powder but mixing binary kits. Following completion of the six devices, Gayle and Charlie will assist the participants individually to set up their effects and fire them off with the Holatron System. Do not show up without safety glasses, long sleeve cotton shirt and long cotton pants. You will be turned away. It is helpful to bring a sharp knife, scissors, and a small wire cutter. If you have an anti static mat wonderful, if not a piece of cardboard will help.
Welcome Orientation Meeting	04:00 - 04:30 PM	WWB Staff	Bleachers	Meeting	Confirmed	
Firebreathing 101	04:00 - 05:00 PM	Levi Morin	Member Bleachers	Seminar	Confirmed	In this workshop, you will learn everything you need to know to try your hand at being a dragon for a day. We will cover Firebreathing Safety, and Firebreathing Fundamentals like Techniques and Materials. The first portion will mainly consist of a lecture and some Q&A. Once that is complete there will be a brief demonstration and an opportunity to practice some of the techniques with water first and then fire for those who signed the waiver. ? PPE Required, safety glasses & a cotton shirt.
Magnificent Magnesium	04:00 - 05:00 PM	Joel Baechle	Tent 1	Seminar	Confirmed	Magnesium (Mg) is one of our great metal fuels used in pyrotechnics with a wide range of applications, but also some unique restrictions. In this seminar Joel will go over the chemistry, safety, activation energies, output and applications - some more unusual than one might expect. Discussion will include when it is most appropriate, when to avoid it, how to work with it. A variety of typical formulas will be presented along with discussion of treating Mg to control unwanted reactions.
5" Ball Shell Workshop - Part I, Group 5	04:00 - 04:30 PM	Mike Garrett, Jim Widmann, Tom Sklebar	Tent 2	Workshop	Confirmed	Have you ever wanted to build a round ball shells? Then this workshop is a good place to start. This workshop will teach you how to make your own 5" paper ball shell. Working with experienced shell builders, you will get hands-on knowledge that will guide you in building a ball shell that looks and performs just like the pros. There are three workshop parts: The first part, 'Introduction to Ball Shells', has a tutorial, demonstration and Q&A. That is followed by Part II for the assembly and wrapping of your shell. A fleet of WASP machines will be used to expedite this procedure. The shell is then dried overnight. On the following day, in the third session, you will apply the lift and leader to the shell. Your shell can be fired that night on the B-line in a special area just for us.
Open WASP Workshop	04:00 - 06:30 PM	WASP Staff	Tent 2 (Rear)	Workshop	Confirmed	
Free BBQ @ Fireworks America campsite	04:00 - 06:00 PM			Social	Confirmed	
Safety Training (How to be a Safety Volunteer)	04:30 - 05:00 PM	Darrell Fiss, Greg Dandurand	Hospitality Tent	Safety	Tentative	The WPA and WWB is run by volunteers and you are encouraged to volunteer for as many things as you can. The Safety Volunteer area in particular needs to be fully staffed or the shooting lines shut down until they are staffed. You can be a Safety Volunteer with just a few minutes of training. It's not difficult, can be done by anyone who is willing and is a great way to meet other club members. Greg and Darrell will make sure you are comfortable with being a Safety Volunteer.
Class C Vending	05:00 - 09:30 PM	WWB Vendors	Class-C Tent	Vendor	Confirmed	
B-Mag Open	05:00 - 10:00 PM	Security Staff	Container			

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Class B Safety Class (How to safely fire your shells)	05:00 - 06:00 PM	Darrell Fiss, Greg Dandurand	Safety tent	Safety	Confirmed	To light your product on the B-line you need a sticker on your badge. That sticker tells the line Safety that you are qualified to light your product. Attend this quick seminar and learn how to safely conduct yourself out on the B-line. Each participant will light one B product under the watchful eye of a trained professional (well, mostly). When he is satisfied that you will be safe then you will get a sticker on your badge.
2nd Welcome Orientation Meeting (if missed the 4:00 time)	06:00 - 06:30 PM	WWB Staff	Hospitality Tent	Meeting	Confirmed	
Open Shooting (No salutes after 9PM!)	06:00 - 10:00 PM	Safety Staff				
Tonight's National Anthem is provided by Hauter Fireworks	07:30 PM - 07:45 AM	Hauter Fireworks	Race Track	Display	Confirmed	
Hauter Fireworks - A Party in the Sky	07:45 - 08:00 PM	Hauter Fireworks	Race Track	Display	Confirmed	
Big Sky Fireworks presents - Light em up!	08:00 - 08:15 PM	Big Sky Fireworks	Race Track	Display	Confirmed	
Pyro Spectaculars' Tribute to Rock - When Rock Music Ruled	08:30 - 09:00 PM	Pyro Spectaculars by Souza	Race Track	Display	Confirmed	
Afterglow	10:00 PM - 02:00 AM	WWB Staff	Quality Inn	Social	Confirmed	
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Saturday, February 18th, 2023

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Pancake Breakfast	08:00 - 10:30 AM	WWB Staff	Sara Park	Social	Tentative	
Public Display Workshop - Part III	09:00 AM - 12:00 PM	Monica Blam, Monty Gill	Crash Camp	Workshop	Confirmed	In this session our Crash Course Display team will work on whatever is necessary, prepping shells, mines and other devices for the Saturday display. Work most likely will include eMatching, mounting devices to hardware and labeling.
New Member Orientation	09:00 - 09:30 AM	Dennis Miele, Greg Dandurand	Hospitality Tent	Meeting	Confirmed	New to the WPA or first time at Western Winter Blast? This seminar is just for you. Attendees will be given a brief history of the WPA, an overview of our policies and safety procedures. Time will be given for individual questions and answers followed by a guided site tour of the WWB site given by some of our current officers and key staff personnel. Get the lay of the land in the sunlight!
Winterblast Registration (Pre-Registered & Walk-In)	09:00 AM - 12:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
Hands-on with COBRA Firing Systems	09:00 - 10:30 AM	Zach Gilbert	Tent 1	Seminar	Confirmed	New to COBRA? Been using it for years? Well, this session is for you. Get hands on time with the world's most popular wireless firing system. This Western Winter blast session will give you a crash course in COBRA. Learning everything from the basics like how to sync your modules to some of the lesser-known tips and tricks. Zach will also talk about how to get in touch with the COBRA team for onsite support when needed.

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Set Pieces for Beginners	09:30 AM - 12:30 PM	Lynden King, Steve Wilson, Bill Stevenson, PIT Crew Staff	PIT Tent	PIT Crew	Confirmed	Set pieces, also known as brightwork, have been made for hundreds of years to augment various kinds of displays. Often shown as large words or flags, many approaches to this art can be used, sometimes dictated by materials available and/or how the piece will be displayed. Using lance, drivers, and a bit of woodworking know-how, we'll build a dynamic set piece to be integrated into Sunday night's Member Showcase display.
B-Mag Open	10:00 AM - 03:00 PM	Security Staff	Container			
Trade Show	10:00 AM - 04:00 PM	WWB Vendors	Sara Park	Vendor	Confirmed	
3" Beginning Bag Mines Workshop	10:00 AM - 12:00 PM	Gina Papini	Tent 2	Workshop	Tentative	In this workshop participants will learn about several types of mines, a mid-level firework device that sprays lit stars into the sky. This workshop will concentrate on the basic bag mine which is simple, effective, and easy to build. Since there are very few wrong ways to make a mine, we will show you most of the right ways. If there is enough time, we will even show you the wrong ways. Each participant will have the opportunity to make a 3" bag mine. These will be available at the B-line for you to light that same evening. Impress your friends with your newfound pyro-making abilities. There is no extra charge for the advice of the experts (it's worth every penny).
6" Double Petal Ball Shell Workshop - Part II	10:00 AM - 12:00 PM	Ellen Webb, Cliff Pearson	Tent 3	Workshop	Confirmed	Lift and Leader of 6" round double petal chrysanthemum shells. Using the traditional Japanese method, the inner petal will be formed with only black powder-coated rice hulls and tissue paper. It is recommended that participants have some shell-building experience beforehand. The 5" Ball Shell workshop, for instance, would provide an excellent background.
Walking Tour of Manufacturing	10:30 - 11:30 AM	Bill Ryan	Manufacturing	Meeting	Tentative	
After The Shutter Clicks - Pyrotography Post Processing	11:00 AM - 12:00 PM	Tom Calderwood	Tent 1	Seminar	Confirmed	Tom Calderwood goes over his process of what happens after he takes a fireworks picture. Recommended to see the Pyrotography seminar first.
5" Ball Shell Workshop - Part II	12:30 - 02:30 PM	Mike Garrett, Jim Widmann, Tom Sklebar	Tent 2	Workshop	Tentative	Lift and leader the ball shell that you made in Part I of this workshop.
Winterblast Registration (Pre-Registered & Walk-In)	01:00 - 05:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
Star Sizes, Weights and Color Changing Designs for Aerial Shells and Mines	01:00 - 02:00 PM	Aaron Mayfield	Tent 1	Seminar	Tentative	Having trouble determining the sizes and weights of stars for different aerial shell sizes? What sizes of stars work well in mines? Wondering how a color changing star works? Curious as how to determine burst charge weights for all sizes of shells? Plagued over what to do with stars that fall on the shop floor and get mixed in with the cat's food? This seminar will provide details regarding how color changing stars work, what general star sizes and weights are needed for ball shells 3" to 12" shells, mines of different types & sizes, and star sizes that work well in different types of cylinder shells as well as general thoughts regarding shell & mine construction. Join us for a fun filled Q&A session filled with a myriad of data gathered over more than two decades of shell building with and alongside some of the greatest master shell builders and factories from around the world.
Fountain & Gerb Workshop	01:00 - 04:00 PM	Scott Morton, Kurt Medlin, Mason Jensen	Tent 3	Workshop	Confirmed	What was the first firework that made you love Fireworks? For so many, and myself, it was a simple cone fountain or a tube fountain that hooked me. Something so simple as a fountain, a small firework that throws out the most beautiful sparks. We'll guess what, in this class you see how easy it is to build your own fountain! Come back in time with us as we rebuild our childhood memories. You will have the option to build a cone fountain or a "gerb" fountain. Choose from golden sparks, bright silver sparks, or maybe even try the golden glitter! Guess what, you then get to light your hand made fountain fountain on the C shooting line, and see how you did! Come have fun, this class is is very simple. Whether it's your first time here or seasoned pyro, this class will put a smile on your face.

Topic/Activity	Time	Presented By	Location	Category	Status	Description
PIT Display Preparation	01:30 - 05:00 PM	Dave Tanner, Bill Stevenson, PIT Crew Staff	PIT Tent	PIT Crew	Confirmed	In this working session, we'll arrange elements of our display onto boards, choreographing groups of effects with the cues of our pyromusical.
European Fireworks: Styles, Traditions & Manufacturing	02:00 - 03:00 PM	Martin Hildeberg	Tent 1	Seminar	Tentative	Curious how they do it in Europe? Martin Hildeberg gives us insight in the European fireworks traditions from Guy Fawkes Day to Las Fallas. Besides the traditional fireworks celebrations, we will learn about the different manufacturing techniques of the European countries.
Study for the Safe Design of a 62" Mortar	03:00 - 04:00 PM	Eric Krug	Tent 1	Seminar	Confirmed	Firework shells greater than 24 inch are rarely launched in North America, and very little technical data is available regarding these exceptionally large shells. A team was established to explore and further develop construction and engineering techniques for the manufacture and safe launch of these exceptionally large shells to support an attempt for setting a potential world record. Proper mortar design is required to provide a safe and predictable launch in proximity to the audience and support staff. Due to the payload size and potential hazards for failure, there are many engineering considerations for the design of the mortar. This presentation reviews the process of internal and external ballistic calculations, the development of equipment for measuring internal pressure profiles, and the evaluation of resultant data for 48 inch shells. These techniques were then used for the extrapolation of internal pressure profiles for a 62 inch shell.
Italian vs. Maltese Shells, 2 Ways of Achieving Similar Results	03:00 - 05:00 PM	Tom Sklebar, Kevin Mather	Tent 2	Demonstration	Confirmed	
Lycopodium and other Powder Mixes for Fire Performances	04:00 - 05:00 PM	Levi Morin	Tent 1	Demonstration	Confirmed	
Open WASP Workshop	04:00 - 06:30 PM	WASP Staff	Tent 2 (Rear)	Workshop	Confirmed	
Safety Training (How to be a Safety Volunteer)	04:30 - 05:00 PM	Darrell Fiss, Greg Dandurand	Hospitality Tent	Safety	Confirmed	The WPA and WWB is run by volunteers and you are encouraged to volunteer for as many things as you can. The Safety Volunteer area in particular needs to be fully staffed or the shooting lines shut down until they are staffed. You can be a Safety Volunteer with just a few minutes of training. It's not difficult, can be done by anyone who is willing and is a great way to meet other club members. Greg and Darrell will make sure you are comfortable with being a Safety Volunteer.
Class C Vending	05:00 - 09:30 PM	WWB Vendors	Class-C Tent	Vendor	Confirmed	
B-Mag Open (Closed during displays)	05:00 - 10:00 PM	Security Staff	Container	Shooting	Confirmed	
Class B Safety Class (How to safely fire your shells)	05:00 - 06:00 PM	Darrell Fiss, Greg Dandurand	Safety tent	Safety	Confirmed	To light your product on the B-line you need a sticker on your badge. That sticker tells the line Safety that you are qualified to light your product. Attend this quick seminar and learn how to safely conduct yourself out on the B-line. Each participant will light one B product under the watchful eye of a trained professional (well, mostly). When he is satisfied that you will be safe then you will get a sticker on your badge.
Open Shooting (No salutes after 9PM!) Closed during Public Display	06:00 - 10:00 PM	Safety Staff	B-Line	Shooting	Confirmed	
A Demo of Skylighter Projects	07:30 - 07:45 PM	Skylighter Supply	Race Track	Display	Confirmed	

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Stellar Fireworks presents a flame effect demo featuring the G-Flame	07:45 - 08:00 PM	Stellar Fireworks	Race Track	Display	Confirmed	
Greg Thomas - Comet Confirmation	08:00 - 08:15 PM	Greg Thomas	Race Track	Display	Confirmed	An educational comet demonstration
Crash Course Pyro - Ol' Sons	08:30 - 08:45 PM	Crash Course Pyro	Race Track	Display	Confirmed	
The Cherry Bombs - Girls, girls, girls...	08:45 - 09:15 PM	The Cherry Bombs	Race Track	Display	Confirmed	
Grand Public Display - Christmas in February	09:15 - 09:45 PM	Fireworks America	Race Track	Display	Confirmed	
Afterglow	10:00 PM - 02:00 AM	WPA Members	Hotel	Social	Confirmed	
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Sunday, February 19th, 2023

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Public Display Workshop - Clean Up	09:00 - 10:00 AM	Monica Blam, Monty Gill	Race Track	Workshop	Confirmed	
PIT Display Setup	09:00 AM - 05:00 PM	Dave Tanner, Bill Stevenson, PIT Crew Staff	Race Track	PIT Crew	Confirmed	We'll spend the day out on the racetrack laying out the elements of Sunday night's display and wiring them to be electronically fired in sync with our choreographed pyromusical.
Winterblast Registration (Pre-Registered & Walk-In) - On call, as needed	09:00 AM - 12:00 PM	WWB Staff	Sara Park	Registration	Confirmed	
WPA General Business Meeting, Election & Awards	10:00 AM - 12:00 PM	WPA Members	Bleachers	Meeting	Confirmed	
B-Mag Open every hour, on the hour, for 15 minutes till 3 PM	12:00 - 03:00 PM	Security Staff	Container			
Members Showcase Deadline to Sign Up	12:00 - 12:15 PM	John Schwabel	Manufacturing	Shooting	Confirmed	
Trade Show	12:00 - 04:00 PM	WWB Vendors	Sara Park	Vendor	Confirmed	

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Members Showcase Deadline to Deliver Product	12:30 - 12:30 PM	John Schwabel	Sara Park	Shooting	Confirmed	
Creating your first Pyro Musical with COBRA and Spirit	12:30 - 01:30 PM	Zach Gilbert, Sam Christensen, Peter Rogoz	Tent 1	Seminar	Confirmed	Get the opportunity to work alongside Peter Rogoz and Sam Christensen of Spirit of 76 Fireworks as well as Zach Gilbert from COBRA Firing Systems as they take you through the process of creating your first Pyro Musical. The Spirit Crew will cover what product to use, and the COBRA team will bring the Scripting Software and Firing System taking you from start to finish. Help them pick the music and the product in this interactive seminar.
Inserts and Outserts, (Garnishments)	01:00 - 02:00 PM	Joseph Madziarczyk	Tent 2	Seminar	Confirmed	This seminar will focus on the devices other than stars that can be put inside (such as tourbillions and pupadels) and/or outside of the shell (rising effects) to enhance the overall effect. Learn how to add inserts and garnishments to spice up your shells. Followed by a discussion of the various popular insert shells and how they are assembled.
Building Multiple Rockets with One Set of Tooling	01:00 - 02:30 PM	Ben Smith	Tent 3	Seminar	Confirmed	This seminar will detail the general construction of a variety of rockets using one set of tooling. Information detailing making fuels and basic shop safety guidelines will also be covered. Nozzled BP, nozzleless BP, whistle and strobe rocket construction will all be detailed. Though this class will use the FireSmith Super BP Core Burn tools, the basic techniques, fuels and safety guidelines are applicable to the construction of just about any type of rocket. A batch of benzoate whistle fuel will be made during this seminar. The making of strobe fuel will also be covered.
An Overview of the Mechanics of Pyrotechnic Strobe Compositions	01:30 - 02:30 PM	Kurt Medlin	Tent 1	Seminar	Confirmed	In this presentation, Kurt will describe the burning mechanism behind pyrotechnic strobe light effects. Topics includes an explanation of the alternating 'dark' and 'flash' reactions that create the strobe effect and the roles of the chemical components in strobe compositions that create those two reactions. Examples will be given for two families of strobe compositions commonly used in practice: ammonium perchlorate-based strobe compositions and nitrate-based strobe compositions. The discussion will focus primarily on understanding the strobe mechanism itself, but will include special considerations and practical information on using strobe compositions in practice.
Star Rolling - The Toro Method	02:00 - 03:30 PM	Ellen Webb	Tent 3	Demonstration	Confirmed	The Toro method of rolling stars is a traditional Japanese technique that grows the stars by using a slurry of the star composition mixed with the wetting agent. This free workshop will show the techniques used to start and grow your stars plus some troubleshooting methods. The workshop will be a blend of didactic and hands-on learning.
Italian Fireworks: Exclusive Look at Facilities in Italy	02:30 - 03:30 PM	Peter Rogoz, Sam Christensen	Tent 1	Seminar	Confirmed	Get an inside look at the fireworks factories (Giuliani Fireworks and Monetti Srl) we just visited in January 2023. See exclusive content not yet released in this special Winter Blast seminar!
Screen Sliced Red Rubber Stars	03:00 - 04:30 PM	Mike Gerson	Tent 2	Demonstration	Confirmed	Skylighter will be teaching how to make Red Rubber Stars using the screen sliced method. These brilliant red rubber stars can be made from scratch and ready to shoot in 3 hours or less. These Parlon bound stars are made by wetting with acetone, and pressed through a large mesh screen rendering stars of relative consistent size and shape. You can even test burn these stars before they are dry. No other method for making fireworks stars is this fast. We will also show how to prime these star after they have dried.
The Art of Fireworks: Inhibitors and Moderators	03:30 - 04:30 PM	Joel Baechle	Tent 1	Seminar	Confirmed	It's what's in the middle that counts! Everyone that experiments with fireworks knows about fuels and oxidizers, what they do, and what can be added to improve or enhance the performance. But how many have tried to modify the quality of the presentation? An artist and a housepainter both use a brush, but the devil is in the details. A look at variations in formulas and containment will show that pyrotechnists have paid attention to control functions since the beginning. Military formulations are often finely tuned for specific purposes, and civilian products, while more oriented to profitability and ease of manufacture, still follow the same logic. Did you know that road flares for use by the Colorado Highway Patrol are formulated differently than those used in Florida? What about a yellow star that looks good at sea level but is almost white in the desert or at low winter temperatures? These questions and many more will be discussed, and there may be more than one answer. It is impossible to cover a subject this big in a short review, but hopefully it will encourage open-minded research and new creative efforts.
Welcome Orientation Meeting	04:00 - 04:30 PM	WWB Staff	Bleachers	Meeting	Confirmed	

Topic/Activity	Time	Presented By	Location	Category	Status	Description
Class C Vending	05:00 - 07:30 PM; 08:30 - 10:00 PM	WWB Vendors	Class-C Tent	Vendor	Confirmed	
B-Mag Open (Closed during displays)	05:00 - 10:00 PM	Security Staff	Container	Shooting	Confirmed	
Class B Safety Class (How to safely fire your shells)	05:00 - 06:00 PM	Darrell Fiss, Greg Dandurand	Safety tent	Safety	Confirmed	To light your product on the B-line you need a sticker on your badge. That sticker tells the line Safety that you are qualified to light your product. Attend this quick seminar and learn how to safely conduct yourself out on the B-line. Each participant will light one B product under the watchful eye of a trained professional (well, mostly). When he is satisfied that you will be safe then you will get a sticker on your badge.
2nd Welcome Orientation Meeting (if missed the 4:00 time)	06:00 - 06:30 PM	WWB Staff	Hospitality Tent	Meeting	Confirmed	
Open Shooting (No salutes after 9PM!) Closed during Public Display	06:00 - 07:30 PM; 08:30 - 10:00 PM	Safety Staff				
Daylight Display Segment	06:30 - 06:45 PM	WPA Members				
Main Public Display Open shooting closed	07:30 - 09:00 PM	WWB Staff				
Members Showcase & Closing Show Open shooting closed for duration of display	07:30 - 08:30 PM	WWB Staff				
Afterglow	10:00 PM - 02:00 AM	WWB Staff				
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WinterBlast Presenters and Contributors

Name	Biography
Fireworks America	
Joel Baechle	Joel Baechle has been involved in pyrotechnics since 1970 when he did his first fireworks display. He started out working at a fireworks stand on the state line and gradually found his way into the proximate pyrotechnics and special effects field, where he continues to innovate today. He tries as best as possible to inspire the creative elements of pyrotechnic progress, the cornerstone of this effort being his 1989 monograph, Pyrocolor Harmony: A Designer's Guide. The purpose of this is to encourage a vision of pyrotechnics that is more artistic and less mechanical in order to bolster its reputation in the face of increasing regulatory issues. He remains committed to a multi-dimensional, American vision of fireworks presentation, rather than a "DJ" approach of launching imports to music. He has a B.A. degree in Sociology, and maintains a keen interest in the evolution of the arts in society through this season of rapid change, especially through the progress of multimedia entertainment. In other words, pyrotechnics should keep pace with changes in lighting design and entertainment presentation, and not become an artifact of the analog era. His wife Barbara has supported him in this difficult field for over 30 years, and their three sons are all involved in music and art as well. He resides in Northern California
Monica Blam	has been working firework shows since 2014, has been licensed since 2017, and attending winter blast since 2015. Her interest in art, rock 'n' roll, punk, and metal music has given her a sense for appreciating the subtle elegance and refinement in fireworks.

Name	Biography
The Cherry Bombs	
Marion Borst	
Tom Calderwood	Tom got hooked on pyro when he was given a (stolen) pack of Black Cats at age 8. He soon discovered Estes and Centuri rockets, and these took priority over 'crackers, sparklers, and smoke bombs. In the WPA, he found his niche with BP rockets. While his love is still with BP rockets, his health prevents him from building – hence he has copious free time to photograph. Tom is retired and recently found a way to escape from California to Tennessee. Married for over 40 years to the same woman, he has 5 children that can call him 'dad' - but it's not their fault.
Clara Carstensen	
Sam Christensen	Content manager and marketing specialist at Spirit of '76 since 2017. Sam graduated with a degree in Journalism, specializing in Strategic Communication, and has quickly become an instrumental component of the 1.4g Industry. Sam's unique set of talents were a huge contribution to the success of the WPA's Virtual Winter Blast of 2021 and has also served time with the Pyrotechnics Guild International in Fargo, ND as Seminars Co-Chairman.
Greg Dandurand	Greg has been in pyro clubs since 1999. He started in the Michigan Pyrotechnic Arts Guild (MPAG) and is a current member of the Pyrotechnics Guild International (PGI). He has been a member of WPA since 2002. He wears the hats of President, Safety Chair, and BATFE Liaison for this event. He is a Head Pyro for a company that shoots shows in the Phoenix area
Danny Dutra	
Round Eyes Fireworks	We are 1.4g fireworks company. We do fireworks display shows. With custom lace work.
Hauter Fireworks	
Big Sky Fireworks	
Stellar Fireworks	
Mike Garrett	Mike has been intrigued by the beauty and ephemeral nature of fireworks for as long as he can remember. However, until 2009 it never occurred to him that anyone could legally make their own fireworks as a hobby. At that time, he discovered two fireworks clubs that changed everything about the way he viewed fireworks and began his journey as a fireworks maker. Those clubs were the Western Pyrotechnic Association (WPA) and Pyrotechnic Guild International (PGI). Mike uses his background in physics and engineering as a foundation to make traditional and not-so-traditional fireworks. He thinks fireworks is the perfect blend of science, technology, engineering, art, and math to express his creative visions. He strongly believes that education will preserve the art of fireworks and make it safer for the hobbyist to participate. You will often find Mike teaching or facilitating educational seminars and workshops related to fireworks at club events. Don't get him talking about fireworks unless you have an hour to burn.
Mike Gerson	Mike Gerson started his fireworks career as a part time crew member before obtaining his operators' license about 10 years ago. Since then he has shot shows all over California as a licensed operator. At some point during that time he met a guy named Tommy who invited Mike to build shells at a WPA event called Do-It. Mike was immediately hooked on manufacturing and joined the WPA to build fireworks at every event he could attend. A few years later Mike caught wind of the fact Harry Gilliam of Skylighter was closing up shop and liquidating the inventory. Would all that wonderful free information about projects and all those handy charts and tables be lost forever? Since Mike had not had a real job in about 10 years (and being basically unemployable) it occurred to him that "Maybe I could be the guy to carry the Skylighter torch for Harry." After a flurry of emails and texts they struck a deal and now it's Mike's problem. Since that time he has updated the Skylighter website and restocked the popular kits and chemicals. Regarding the fireworking community in general, Mike is certain that he has found his people and now owning Skylighter he is "living the dream."
Zach Gilbert	Zach Gilbert is the sales and support manager at COBRA Wireless Firing Systems, the industry leader in wireless firing technology. With a passion for pyrotechnics, Zach brings a wealth of knowledge and experience. He has been working in the field for many years and has a deep understanding of the technology and the industry. Zach is responsible for managing the sales and support team at COBRA Wireless Firing Systems, ensuring that customers receive the best possible service and support. In addition to his role at COBRA Wireless Firing Systems, Zach is a pyro at heart.
Monty Gill	crewed his first public display Independence Day 2006 and has not looked back since. He joined the WPA a few years later. When not working as a professional bio writer, he is doing mature adult things. Definitely not reading comic books, playing video games, watching cartoons, going to heavy metal shows, watching horror movies, shooting stuff, or playing with fireworks.
Martin Hildeberg	Martin, a well-known Swedish pyro, has been fascinated by fireworks since the age of 7. He has worked all his life in the design of fireworks and pyromusicals, boasting 24 gold medals from international fireworks competitions. Martin is a recent WPA member and in his private life he enjoys travelling, diving, hunting and cooking.
Mason Jensen	Mason Jensen: Hailing from Southern Idaho, Mason is a collector of weird literature, dangerous chemicals, and a reasonable amount of string. He works full time in the family fireworks business, Acme Fireworks. When he isn't involved with fireworks Mason spends his time relaxing with his small family, cooking large BBQ, and playing miniature golf.
Dominykas Juknelevičius	
Lynden King	Lynden King was first introduced to fireworks displays by John Sullivan of the old California Fireworks Company (Red Devil) when he was 16 years old. John helped Lynden get his license a month after he turned 21 in 1973 and Lynden did his first show a few weeks after that. He has been putting together firework shows for over 50 years and is involved in about 20 firework displays a year, all of which are partially or completely electrically fired. Lynden has been a member of the WPA since 1997 and several years with PGI.
Eric Krug	Eric Krug graduated in 1985 from Kansas State University with a Bachelor of Science degree in Electrical Engineering Technology. He then moved to Loveland Colorado and specializes in electrical and mechanical product design. He owns his own development company that includes a full machine shop. Eric also teaches advanced CNC machining at the local community college. Eric has been very active as a licensed professional pyrotechnician since 1981. He has had the opportunity to compete in the Montreal International Fireworks Competition twice and is the lead pyrotechnician for many large pyro productions. Eric is very active in the PGI and other groups. As a part of his product development company, Eric also produces a wide variety of tools for the pyro industry. Eric is also an accomplished musician and plays a variety of instruments.
Joseph Madziarczyk	is an accomplished fireworks maker concentrating on the Italian style of shell building. He is an award-winning photographer of fireworks; he has served as a national judge for PGI fireworks competitions and as the San Diego Area VP for WPA. During his career in fireworks, he had been both a consumer dealer of fireworks and a display operator. But most of all, he loves teaching pyrotechnic basics to beginners.

Name	Biography
Steve Majdali	Steve Majdali is a charter member of the WPA, a member of the PGI since 1984, and is an executive member of the Reaction Research Society (the oldest amateur rocketry organization in the USA). He has been published in several pyrotechnic newsletters as well as Pyrotechnica and American Fireworks News. Always willing to share, Steve has given seminars or demonstrations at every PGI convention attended so far (20 to date) and many more at Winter Blast. A licensed pyrotechnic operator for over twenty years in CA, Steve is a fabricator of pyrotechnic tooling, an amateur chemist, and a pyrotechnic consultant and educator. An electrical mechanic by trade and an inventor/tinkerer by nature, He is mostly self-taught in chemistry, fluid power systems, and writing. He has been a fireworks enthusiast since his youth and learned machining to further his research in pyrotechnics and rocketry.
Kevin Mather	Kevin Mather (aka "Moonbeam") has been mixing chemicals and playing with fire since he was given a chemistry set at age 8. When asked about how he got started in pyro, he quickly answers that his mother is primarily to blame. Growing up in Colorado, fireworks were a common part of family celebrations and were actively encouraged by his mother. Kevin has been quoted saying, "Birthdays, Christmas, Chanukah, the summer solstice, and most days of the week were all celebrated with fireworks in my family." Kevin is fascinated by Italian shell construction and attributes this to his love of "cut and paste" in kindergarten.
Aaron Mayfield	Aaron Mayfield is owner and primary shell designer for AM Pyrotechnics, a large-scale manufacturing company in the United States that originated in the late 1990's. AM Pyro produces more than 20,000 aerial shells, mines, & comets yearly and have done so since 2008. Prior to 2008, Mr. Mayfield worked with factories in Italy, Spain, & China regarding all types of shell designs & innovative creations. At home in his spare time Aaron is also a fabulous cook and an accomplished donkey trainer.
Kurt Medlin	Kurt Medlin first began trying to make fireworks around age 10 (with the patient tolerance of his mother and the encouragement of his father!). An avid collector of fireworks books and publications, Kurt acquired copies of the classic texts by Weingart, Davis, and Lancaster by his late teens. Kurt joined the PGI in 1982 at age 22, attended his first PGI convention in 1983 and gave his first seminar at the 1986 PGI convention. Kurt worked his first public fireworks display in 1984. Kurt is a life member of both the PGI & WPA and a former board member of both organizations. Kurt has given seminars at previous PGI conventions and WPA Winter Blast conventions on black powder rockets, tourbillions, girandolas, large bore candles, fountain and wheel construction, and traditional Italian shell building. In addition to hands-on firework making, Kurt is interested in fireworks history and collecting antiquarian fireworks literature.
WPA Members	
Dennis Miele	Dennis Miele got his start in fireworks in 2001 helping a study group friend with a hand-fired 4th of July show in Mission Viejo, CA. Two more hand-fired shows that season and Dennis was hooked, becoming a licensed pyrotechnician for Pyro Spectaculars in 2002, shooting many large and small shows ever since. He started attending WWB (unofficially) in 2001, becoming a member of WPA in 2002. Dennis is a prolific volunteer often seen on the B line doing volunteer safety. He is currently Secretary of WPA and loves (almost) every minute of it!
Levi Morin	Levi Morin is a California native with a passion for flow & fire arts. He has been practicing fire arts for over a decade. Levi has studied alongside some of the best in the business and is well regarded as an expert in his field. 5 years ago, he was brought on as a performer and the head of marketing for Ignite Firedance and later started the specialty performers effects company FlameFX.
Scott Morton	Scott Morton a relative newcomer to the organized pyro community, has enjoyed fireworks for as long as he can remember. His interest in making fireworks eventually led to his finding Ned Gorski and Fireworking.com, and then into the pyro community with membership in WPA and PGI. Scott has become an accomplished builder of ground and aerial fireworks. His current areas of special interest include Italian Cylinder shells, the glitter effect, and all ground fireworks, specifically items that spin! When not studying or making fireworks, Scott is a fireman and paramedic who enjoys spending time with his wife Amy.
Amanda Nixon	Amanda has been working with proximate pyrotechnics for 50 years, yet she's still only 39 years old - go figure. Formerly the Vice President and later CEO of Luna Tech, Inc., manufacturers of Pyropak proximate pyrotechnics, Amanda was also the CEO of Luna Tech Pyrotechnik GmbH in Germany for two decades. Licensed in several countries, she taught theatrical pyrotechnic classes and worked as a proximate pyrotechnician throughout Europe. Currently, she is the CEO of Pyroam, Inc., which distributes a variety of proximate pyro effects and equipment as well as provides pyrotechnic services.
Gina Papini	Victor and Gina Papini work on several pyro crews at night and by day are both retired and run a non-profit daycare (babysitting the grandkids). Victor has loved fireworks his entire life and has some stories to tell about his younger days (can't print because not sure about the statute of limitations). When Victor joined a pyro crew, Gina also joined so she wouldn't have to sit at home alone while Victor had all the fun. Victor learned about manufacturing when he first attended Do-It. He started taping shells on rockets and now puts gasoline in a bottle on rockets. Gina, looking for something to do, started with bucket mines, bag mines, and then progressed to shells. She asked for and got a WASP machine for an anniversary present. Victor also builds shells when he runs out of rockets. Never lighting her own products, Gina lets Victor do the honor while she pretends to take pictures. He thinks she has tried to kill him on several occasions and has since let his life insurance lapse hoping to avoid future "accidents." Friends Theresa and Jon will be helping out in the seminar to make sure there are no more "accidents."
Cliff Pearson	
Peggy Purner	
Crash	
Course Pyro	
Antonio Restivo	Antonio Restivo's career with fire started at the late age of 8 when he set his best friends backyard on fire and burned down 6 acres of property. Realizing then, it had to become a career or he would just end up in jail. With his Italian/Sicilian background, it could have gone either way! In the late 90's he learned to spin Poi and traveled around the world spinning and teaching classes. His safety classes developed from using Duvatyne or a wet towel, to the different types of fire extinguishers. After being in Las Vegas and working on some of the biggest pyro shows in the world, Antonio started to put a lot more focus into safety and what that means everyday. He has been a senior fire safety instructor for companies like Cirque du Soleil, Celestia, MGM and even teaching classes for Clark County Fire (mainly teaching inspectors what to look for with fire performances).
Peter Rogoz	Vice President and product manager for '76 Pro-Line. I work remotely from Chicago on continuing the success of '76 Pro Line and I'm absolutely thrilled to have recently joined the Spirit of '76 team! I've been in the fireworks industry since the summer of 2007 in various roles including designing and producing fireworks displays, importing and wholesaling 1.4G and 1.3G fireworks, representing Vulcan/Shogun in the USA, promoting Galaxis G-Flames and firing systems, and most recently consulting with Spirit of '76. In my free time, I enjoy fishing, cooking, and comedy. I'm looking forward to chatting with everyone Winter Blast!
Bill Ryan	
John Schwabel	

Name	Biography
Tom Sklebar	Tom started helping his father dynamite rocks as a kid almost 60 years ago. He is a hobbyist pyro who has built various devices for some time starting in the 1990's. A member of PGI, WPA, FPAG, Northern Lighters, WPAG. For his usual private 4th of July show he builds lance work, gerbs, mines, rockets, wheel, saxons, tourbillions, girandola, comets, ball shells from 3 - 12", Maltese single and multibreak shells, Italian single and multibreak shells and various other articles pyrotechnic. Tom has taught or helped at workshops and seminars for some years now (as well as neighbors and their children and now grandchildren)
Ben Smith	Ben started his pyro career at an early age. As a boy, he saved his pennies throughout the year just to be able to visit the fireworks stands during that one great week in July. While in elementary school, he was exposed to the world of rocketry and began constructing sugar and BP rockets. This led to the experimentation and construction of other pyro devices. Ben currently owns and operates FireSmith Pyrotechnic Tooling. Through this enterprise, he has designed and currently manufactures over 150 different tools and machines used to construct a wide variety of pyro devices.
Pyro Spectaculars by Souza	With an iron-clad commitment to highest level of service to our customers and all governing fire authorities, we use the finest resources in the industry to provide a safe, cost-efficient, and, well... spectacular fireworks show each time, every time, all the time.
Bill Stevenson	By day, Bill is a software project manager in Silicon Valley, and in his free time he enjoys woodworking, leading a Cub Scout Pack, and using fireworking to teach himself and his kids about the intersection between art and science.
Skylighter Supply	
Dave Tanner	
Greg Thomas	
Mike Tockstein	Having an absolute fascination with fireworks and an interest in electronics since he was a kid, Mike promptly earned his CA pyrotechnic operator's license two weeks after his 21st birthday, and went on to earn his M.S. degree in electrical engineering a number of years later. After shooting shows for fireworks display company Pyro Spectaculars for a number of years, Mike started Pyro Innovations in 2003 to aid in recruitment and training. In 2007, Mike published the most comprehensive online training platform for professional pyrotechnics to pyroinnovations.com, which ended up improving safety, on-site training efficiency, and consistency in training new crew. Throughout his 22+ years as a licensed pyrotechnician, Mike has performed over 250 professional fireworks displays, been involved in many entertainment and media productions, including Discovery Channel's "Mythbusters," along with celebrity weddings, major sporting events, TV commercials, theme parks, and more. Mike now enjoys providing unique experiences like Winter Blast for his two daughters.
Collin van Uchelen	Collin van Uchelen, Ph.D., is a Community Psychologist, Conceptual Artist, and Pyrotechnician-in-training based in Vancouver, British Columbia, Canada. Collin's work is informed by his own experience of sight-loss from a degenerative blinding eye disease. His work in the pyrotechnical arts explores techniques for translating the light of fireworks into non-visual forms, such as descriptive words, sounds, and textures. Currently, he is choreographing a pyro-musical display from his unique position as a blind pyrotechnical designer.
Jesse Veverka	Jesse Veverka was trained as an aerospace engineer and worked as a financial analyst on Wall Street before co-founding his own media production company, Veverka Bros. Productions LLC, with his brother Jeremy. He has worked and lived throughout Asia, including Japan, Korea, China and Indonesia. He has spent the last seven years filming the Passfire fireworks series in 25 countries on six continents.
Ellen Webb	Ellen Webb is a retired Critical Care nurse who, until very recently, always admired all things pyrotechnic from afar. When her husband successfully battled cancer, they decided it was time to start doing things they had always wanted to do. So in 2017, they went to their first PGI Convention, and a shell-building class was all it took to firmly set the hook. Ellen returned home from PGI with a thumb drive full of pyro literature, 150 pounds of chemicals, and had a cement mixer on order. At the 2018 Convention Ellen entered 4 shells constructed with the same techniques to be taught in the class into Aerial Level 4, and was awarded 2nd Place. Her pyro interests include star rolling and Japanese-style ball shells.
Jim Widmann	Jim Widmann is a long-time fireworks enthusiast and professional. Jim has shot shows for most of the fireworks companies in the Northeast US and in 1985 started a fireworks display company based in Connecticut. He was a founding member and president of the Connecticut Pyrotechnics Association. As a kid, July 5th was Jim's favorite day of the year because he would find leftover dud fireworks from the neighborhood displays and cobble them together into something new and of his own making. Jim is a 30+ year member of the PGI and has competed and won in many of the display shell categories. He has a CT display operator's license and is also licensed in CT as a pyrotechnic manufacturer. Jim is widely known as the inventor of the WASP automatic shell pasting machine and has sold hundreds of these machines in over 22 countries. In recent years, Jim has successfully built and shot world record shells (up to 62") in North America and the Middle East.
Steve Wilson	Steve got his start pyrotechnically as a boy when he and his brother Bob used to mix and burn whatever they could get their hands on. This included toy caps, ammonium nitrate from the local citrus farmers, calcium hypochlorite tablets for the Doughboy pool, and sulfur from the Gilbert chemistry set. Steve had a lot to learn back then... Eventually, he acquired a copy of Weingart's book, discovered American Fireworks News and then the PGI. Steve's fireworks got a little bit better. In 1988 he had the crazy idea of starting a pyro club in the western USA and soon after the WPA was formed. Formerly a lighting roadie with some 70's bands like ZZ Top, Chicago, and Styx, he still works in local community theater as a lighting designer, technician, and equipment fabricator.