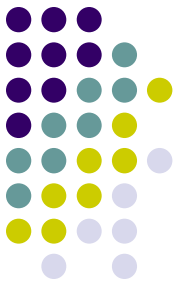


Wow, that looks like fun!

How do I start?





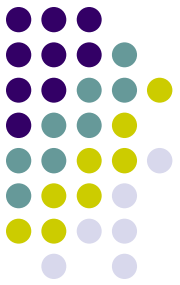
Considering Starting A Fireworks Display Company?

By Robert T. Kellner

President, Kellner's Fireworks Inc.

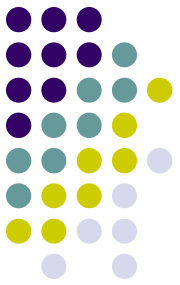
© Kellner's Fireworks Inc.

Disclaimer

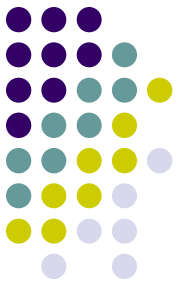


- This presentation is based solely on the experience of the presenter. Attendees are cautioned that they must form their own opinion as to the application of anything contained in this presentation. The presenter and Kellner's Fireworks Inc. assumes no liability for anyone's actions, injuries, property damage, or violation of law which may or may not be alleged to have occurred as a result of attending this seminar.
- This presentation is for people wishing to get in to the Fireworks Display business. Accordingly, not all of the information presented here is applicable in every unique situation. This presentation is not designed for personal, non-commercial fireworks shows.

QUOTES



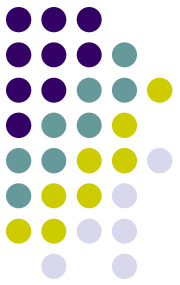
- *“Entering the Fireworks Display business in contemporary times requires a great deal of Capital, a loyal talented management team, thorough risk management and lots of physical sweat in order to gain success. Although the business risk is great, the emotional and financial rewards are wonderful as well”* Phil Grucci, President/CEO Fireworks by Grucci Inc.
- *The fireworks business is a combination of the explosives business and the entertainment business. Remember first and foremost that you are dealing with explosives. If you don't respect this fact, you are a danger to yourself and to others. As far as it being part of the entertainment business, our job is to entertain and make people happy. It's as simple as that. However, it is hard work and not necessarily glamorous. Whereas an entertainer, such as a singer, practices, gets on stage, performs and then goes home, a pyrotechnician, all at once, is the truck driver, roadie, builder, sound technician, cleaner, computer operator, electrician, carpenter, hole digger, administrator and much more. So if you want to get in to the fireworks business, remember that at every gig you work at, you will be the first to arrive, the last to leave, and not many people will see your face. Other than all of that, it is the best job in the world!* Robert Foti, ICON Pyrotechnics International



QUOTES

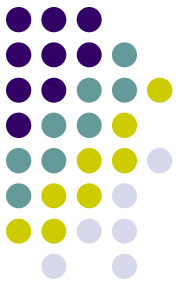
- *My favorite T-Shirt says on the front “I am a professional pyrotechnician. The back says “If you see me run, try to keep up!”. Seriously, the fireworks business is heavy with regulation, responsibility and accountability, but there is not a better legal high in life! Don’t expect to get rich. You can make more money many other ways. Life should not be measured in how many breaths you take, but by how many times your breath is taken away. Fireworks top that list!* Lansden Hill Jr., President/CEO Pyro Shows, Inc.
- *Learn what fireworks are, what they’re made of, how they are put together and why they work the way they do. Once you really get to know them you’ll not only gain a great appreciation for such an incredible craft, you will cultivate a great sense of awe and respect and you’ll stand out among those whose only desire is to simply “light use, and get away”.* John Rozzi, Rozzi Fireworks

What are Display Fireworks?



- Display Fireworks are fireworks devices in a finished state, designed primarily to produce visible or audible effects by combustion, deflagration, or detonation. This term includes, but is not limited to Salutes containing more than 2 grains (130mg) of explosive materials, Aerial shells containing more than 60 grams of pyrotechnic compositions, and other display pieces which exceed the limits of explosive materials for classification as “Consumer Fireworks”.

Transportation Classifications of Display Fireworks



- 1.1G UN0333 Fireworks
- 1.3G UN0335 Fireworks
- 1.4G UN0431 Articles Pyrotechnic for Technical Purposes
- 1.4S UN0432 Articles Pyrotechnic for Technical Purposes
- 1.3G UN0101 Fuse-non detonating (instantaneous or Quickmatch)
- 1.4S UN0454 Igniters



1.1G UN0333 FIREWORKS

Highest classification of explosives. Mass explosion hazard.



1.1G UN0333 Fireworks

1.1G Fireworks typically are color effect shells greater than 10" in diameter or Salute effect shells with over 2.5 oz. of explosive composition "Flash Powder". Ocean Shipping Lines will not take 1.1G Fireworks, so in the U.S., these are limited to American or Mexican made.



1.3G UN0335 FIREWORKS

Most common type of Display Fireworks.

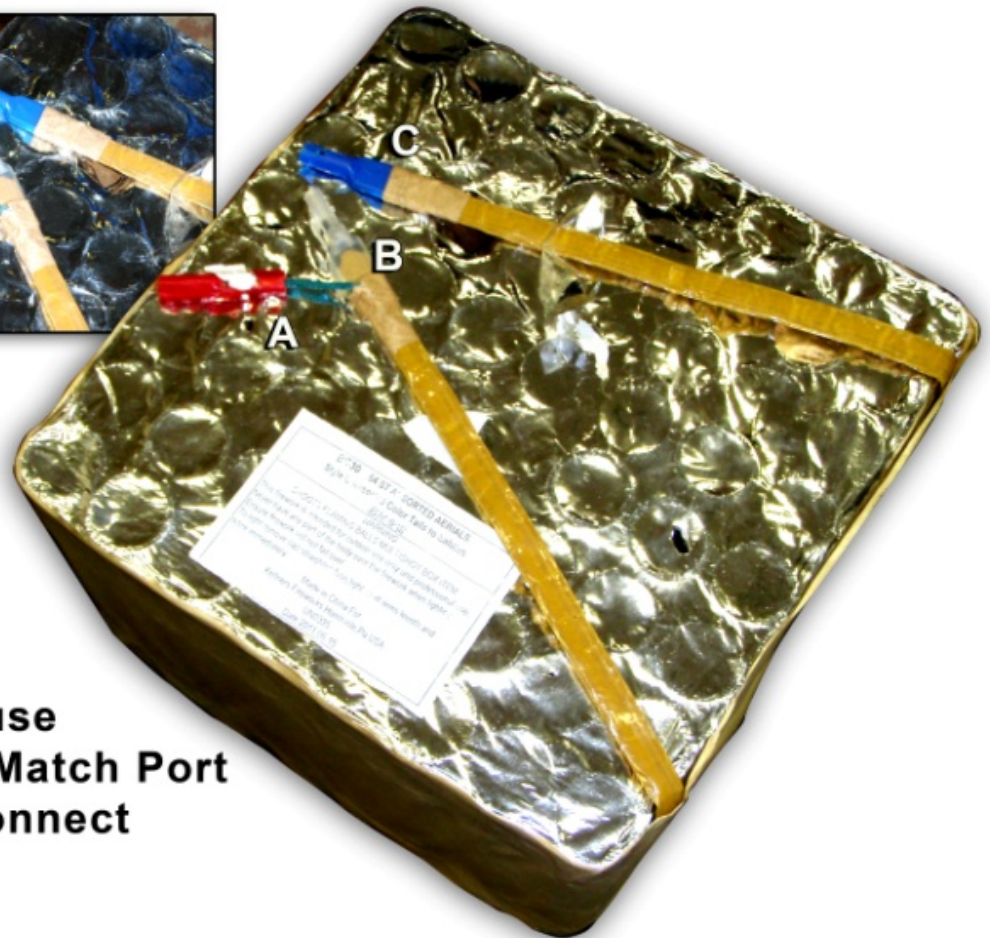
Mass fire, minor blast hazard



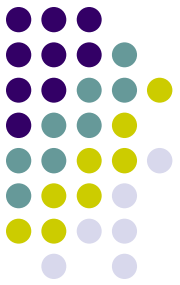
1.3G UN0335 Fireworks

Over 90% of the world's supply come from the Hunan region of China.

Other 1.3G UN0335 Fireworks



- A. Green Fuse**
- B. Electric Match Port**
- C. Quick Connect**

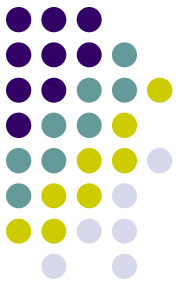


1.4G UN0431 Articles Pyrotechnic for Technical Purposes

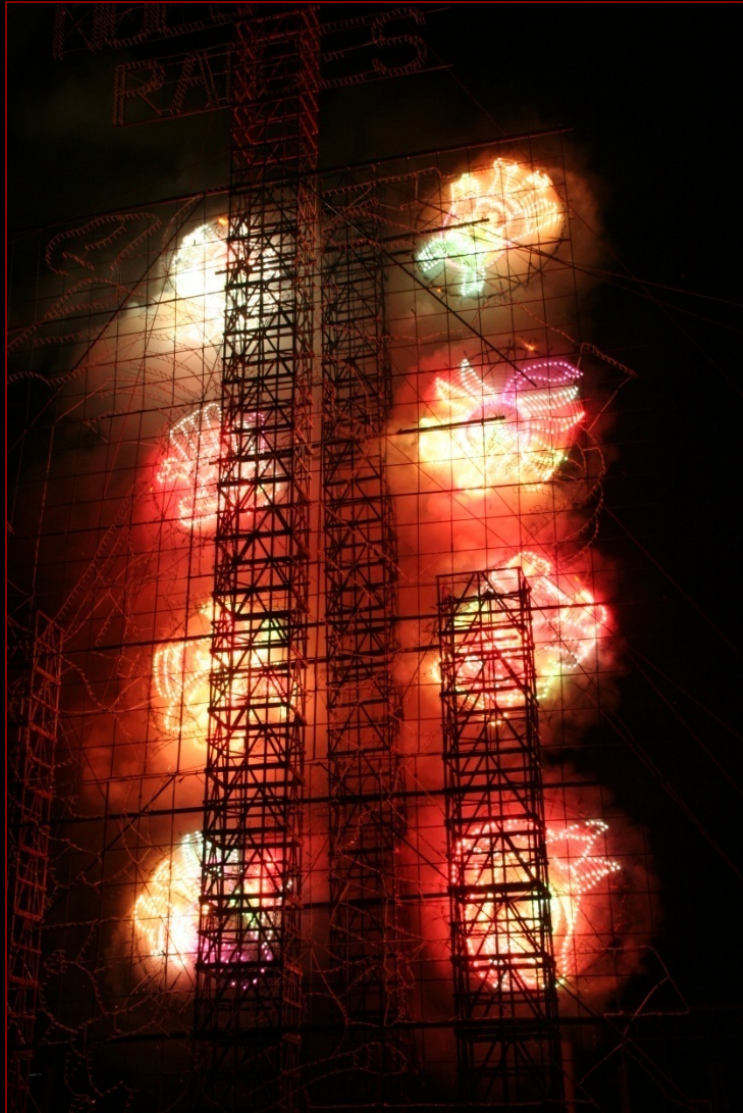
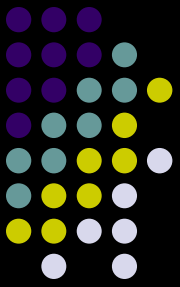
“Theatrical Pyrotechnics”. Produced for professional use, similar to Consumer Fireworks in chemical composition, pyrotechnics limits and construction but typically ignited with an electric igniter and not intended for consumer use. Moderate Fire Hazard. No Blast Hazard.

Other 1.4G UN0431 Articles

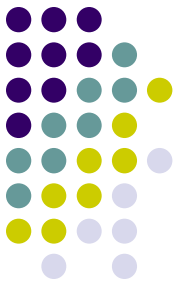
Pyrotechnic



What Can Be Done With Articles Pyrotechnic



DISPLAY FIREWORKS FUSE



**1.4S UN0432 Articles
Pyrotechnic “Sticky Match”**



**1.3G UN0101 Fuse-non
detonating “Quick Match”**



1.4S UN0454 Igniters

"Electric Matches"

Very friction sensitive.

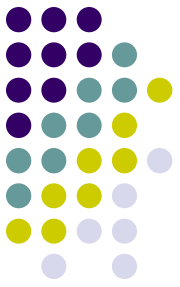


Allow for accurate timing.

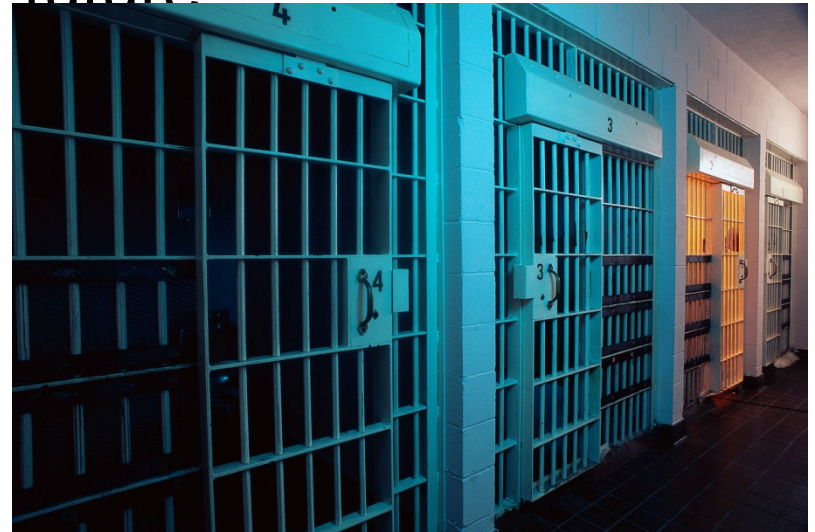


SAFETY & COMPLIANCE

First Priorities

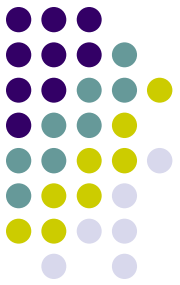


- Without them.
- You're looking at your future



SAFETY

Educate Yourself



1.) Pyrotechnics Guild International

www.pgi.org

Display Fireworks Operator Certification Class.

Get certified. Learn the basics of Fireworks Display Safety.

Network/Volunteer

2.) National Fire Protection Association

www.NFPA.org

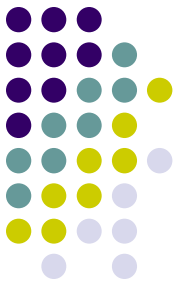
NFPA 1123 Code for Fireworks Display

NFPA 1126 Standard for Use of Pyrotechnics Before a Proximate Audience.

Required Code for many states. Required Code for many insurance carriers.

Compliance

Police Yourself



1.) Bureau of Alcohol, Tobacco, Firearms and Explosives

www.ATF.gov

Regulates the Distribution and Storage of Explosive Materials

2.) US Dept of Transportation

www.HAZMAT.dot.gov

Regulates the Transportation of Hazardous Materials

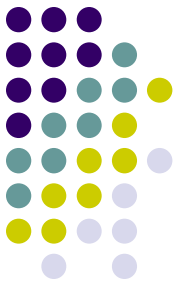
3.) American Fireworks Standards Lab

www.afsl.org

Ensures that certified devices may be transported, stored and used safely

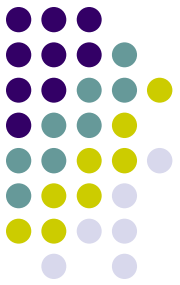
- ALSO, don't forget State, County and Local requirements

A.T.F. Requirements



- 1.) Federal Explosives License (FEL)
for Responsible Person (Owner). Initially \$100.00
- 2.) Register Employee Possessors
for Employees/Helpers.
- 3.) Legal Explosive Storage (Magazine)
- 4.) Accurate Inventory System

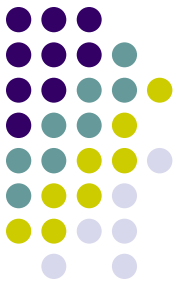
ATF License (FEL) Requirements for User of Fireworks License.



- **The Responsible Person must:**
 - 1.) Be over 21 years of age.
 - 2.) Not be a fugitive from justice.
 - 3.) Not be an unlawful user of, or addicted to marijuana or any depressant, stimulant, narcotic drug or any other controlled substance.
 - 4.) Not have ever been convicted in any court of a felony, or any other crime, for which you COULD have been imprisoned for more than one year, even if you received a shorter sentence, including probation.
 - 5.) Not be under indictment in any court for a felony, or any crime, for which the judge COULD imprison you for more than one year or presently appealing a conviction of a crime punishable by imprisonment for a term exceeding one year.

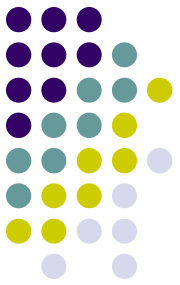
ATF License (FEL) Requirements

for User of Fireworks License continued



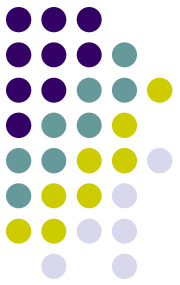
- 6.) Not be an alien in the United States (unless you are a lawful permanent resident).
- 7.) Not have been adjudicated mentally defective/incompetent or been committed to a mental institution.
- 8.) Not have been discharged from the Armed Forces under dishonorable conditions.
- 9.) Not have renounced your United States citizenship.
- 10.) You must be in compliance with all State and Local Explosive/Fireworks License/Permit requirements.

Employee Possessors



- All licensees must register anyone who has or will have actual physical possession of explosives materials (i.e. Shooter, Driver) with ATF as an “Employee Possessor”.
- The criteria to become an “Employee Possessor” is the same as for a “Responsible Person” except they can be under 21 years of age.

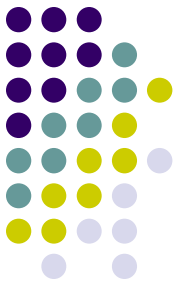
ATF Storage Requirements



- You must have an approved Explosives Storage Magazine or the ability to store your product in an approved Explosives Storage Magazine in the case of an emergency (i.e. Rainout, Display Postponement). This is called “Contingency Storage”.
- You must have written permission from the Licensee for Contingency Storage. This must be, typically, within approximately 100 miles of your display site
- Type 4 Outdoor Explosives Magazine (normal storage magazine for most Display Fireworks)
- Requirements:
 - 1) A building, igloo, dugout, box, trailer or semitrailer.
 - 2) Fire-resistant, weather-resistant and theft-resistant.
 - 3.) Constructed from masonry, metal-covered wood, fabricated metal or a combination of these.

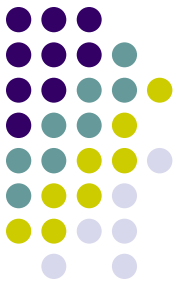
ATF Storage Requirements

continued



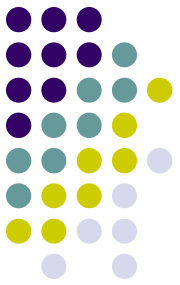
- 4.) Walls and Floors are to be constructed of, or covered with a non-sparking material or lattice work.
- 5.) Doors must be metal or solid wood covered with metal.
- 6.) Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked. They must be attached by welding, riveting or bolting.
- 7.) Two padlocks that must have at least five tumblers and case-hardened shackles of at least 3/8" diameter.
- 8.) Steel hoods of not less than 1/4" steel constructed so as to prevent sawing or lever action on the locks, hasps and staples.
- For Display Fireworks storage weight, unless you have documented exam results, ATF will consider Display Shells to be 50% Explosive composition and other Display Fireworks to be 25% Explosive composition.

ATF Type 4 Magazine Location Requirements.



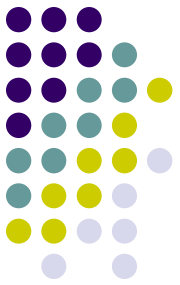
- 1.) Must use §555.224 ATF Table of Distances for required distance to inhabited buildings (not your office), passenger railways or public highways.
- 2.) Area surrounding magazines must be kept clear of rubbish, brush, dry grass or trees (under 10' high) for not less than 25' in all directions. Volatile materials are to be kept a distance of not less than 50' from outdoor magazines.
- 3.) Magazines storing explosive material shall be inspected every seven days to determine whether there has been unauthorized entry or attempted entry in to the magazine.

ATF Storage Exceptions



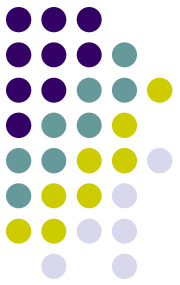
- Type 4 Explosives Magazines are not allowed for “Bulk Salutes”
- §555.224 Tables for storage distances cannot be used for “Bulk Salutes”
- Permanent storage of “Bulk Salutes” has to be in a Type 1 High Explosives Magazine, subject to the §555.218 Tables of distances for storage.
- 1.4G UN0431 Articles Pyrotechnic for Technical Purposes and 1.4S UN0432 Articles Pyrotechnic for Technical Purposes do not have to be stored in Explosives Magazines.
- 1.3G UN0101 Fuse and 1.4S UN0454 Igniters do have to be stored in Explosives Magazines.

ATF Inventory System Requirements



- 1.) Each permittee must take true and accurate physical inventories.
- 2.) Each permittee must, not later than the close of the next business day following the date of acquisition, enter the following information in a separate record: a) Date of Acquisition, b) Name or brand name of manufacturer, c) Manufacturers marks of identification, d) Quantity, e) Description, f) name address and license of supplier

US DOT Training Requirements

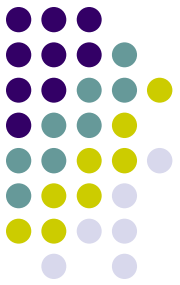


All Display Fireworks company employees must receive transportation safety training. This must be done every three years and documented by your designated trainer. Training materials can be purchased from companies such as JJ Keller www.jjkeller.com

All Display Fireworks drivers must have a Commercial Drivers License with a Hazardous Materials endorsement

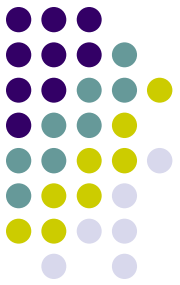
All Vehicles transporting any amount of 1.1g or 1.3g Fireworks or over 1,000 pounds of 1.4g Fireworks must be marked with the name of the company, principal place of business, motor carrier identification number “US DOT #” and placarded correctly.

US DOT Training continued



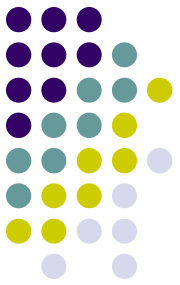
- All Display Fireworks vehicles must be equipped with a mounted fire extinguisher, spare fuses and emergency warning devices (not flares).
- No Display Fireworks can be modified (i.e. having Igniters attached) prior to arriving at the shoot site.

U.S. DOT Recordkeeping Requirements



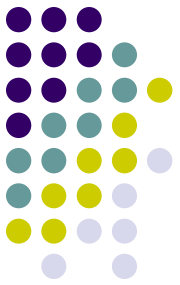
- All Display Fireworks haulers who transports over 55 pounds of 1.1 or 1.3g Fireworks annually must register with the US DOT and pay a fee as a Hazardous Materials provider.
- All Display Fireworks drivers who operate over a 100 air-mile radius of their office are required to maintain a vehicle log book.
- Anyone who transports Display Fireworks must develop and implement a security plan.
- Anyone packaging or repackaging Display Fireworks must use boxes tested and certified to comply with DOT performance specifications.

US DOT Recordkeeping continued



- Any Display Fireworks Shipment must be accompanied by emergency response information and must contain a telephone number monitored at all times that a shipment is in transportation.
- All Fireworks Haulers must be certain that each driver has undergone a medical examination within the past 24 months and has been certified as qualified to drive a motor vehicle.
- All Fireworks Haulers must implement a drug and alcohol testing program.
- All Fireworks Haulers must maintain a driver qualification file and accident reports for each driver.

US DOT Recordkeeping continued



- Vehicle inspection, repair and maintenance records must be kept by the fireworks hauler.
- Vehicles transporting Display Fireworks must be attended at all times.
- Vehicles transporting Display Fireworks must have a written route plan to their destination.
- All Display Fireworks must be approved for transportation by the US DOT prior to be transported. Approval is indicated by the item being assigned an E.X. number. This number must listed on the shipping papers or the item carton.

FLEET SAFETY COMPLIANCE MANUAL

A COMPLETED RECORD

DRIVER'S DAILY LOG

(24 HOURS)

4 / 1 / 04
(Month) (Day) (Year)

Original - File at home terminal
Duplicate - Driver retains in his/her possession for eight days

WASHINGTON TRANSPORTATION

Name of Carrier or Carriers

WASHINGTON, D.C.

Main Office Address

11

→ 270

Total Miles Driving Today

TT#12, TR#21

Truck/Tractor and Trailer Numbers or
License Plate(s) / State (show each unit)

I certify these entries are true and correct:

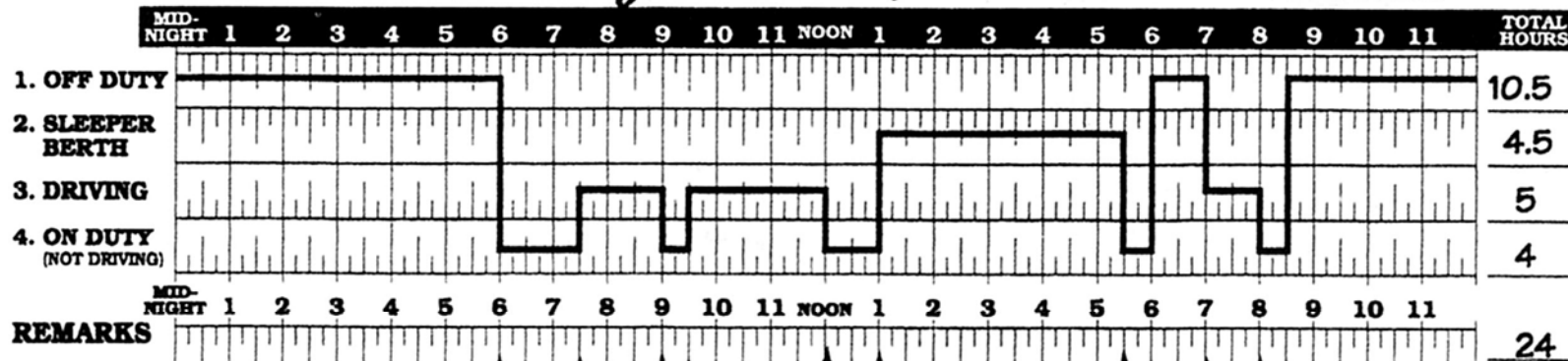
John E. Doe

Driver's Full Signature

W. R. Smith

Co-Driver's Name

12



Richmond, VA.

Fredericksburg, VA

Baltimore, MD.

Newark, N.J.

Franklin, N.J.

SHIPPING
DOCUMENTS:

1673, 1674

B/L or Manifest No.
or

Shipper & Commodity

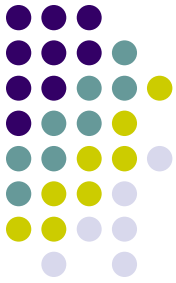
Enter name of place you reported and where released from work and when and where each change of duty occurred.

USE TIME STANDARD AT HOME TERMINAL

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611-L

A shipping paper must accompany the shipment of all fireworks and contain specified information



UPS WE14.0.21
STRAIGHT BILL OF LADING - SHIPPING ORDER NOT NEGOTIABLE
UPS FRIGHT (UPSF)

SHIPPER
KELLNERS FIREWORKS
ATTENTION: DONNA PHIPPS
478 OLD ROUTE 8
HARRISVILLE, PA 16038
US
PHONE: 814787995

WED SITE: www.ups.com
DATE: 10/24/2011

Page 1 of 1

CONSIGNEE
[Redacted]
[Redacted]
PHONE: [Redacted]

BILLING METHOD
☒ Prepaid
☐ Collect
☐ Third Party

GUARANTEED DELIVERY REQUESTED (if box is checked)
By checking this box, the Shipper requests UPS Freight to guarantee delivery of this shipment according to UPS Freight's terms, schedule and rates to pay 25% more (\$30 minimum) above the spot normally incurred with this service. Freight will not be liable for payment if shipment fails to deliver on scheduled day.

Received \$ _____ to be delivered in the payment of the charges on the unitary document herein, signed or accepted.

# OF PIECES	PKG TYPE	HM *	DESCRIPTION OF ARTICLES & SPECIAL MARK	WEIGHT	UOM*	NMFC	CLASS
100	Box	X	FIREWORKS 1.4G UN0336, PG II	900	LBS		85
10	Box	X	FUSE SAFETY JAS. MM010'S PG II	150	LBS		85
			Handling Int: NET EXPLOSIVE WT. - 263 LBS.				
				TOTALS: 1000			

SHIPPED AS: 1 HANDLING UNITS AND LOOSE

Marked with an "X" to designate Hazardous Materials as defined in Title 49 of the Code of Federal Regulation
Hazardous Material Emergency Contact Number: CHEM TEL 8882006782 8002583924

Additional Services (CHARGES MAY APPLY)
☐ CALL BEFORE DELIVERY
☐ CONSTRUCTION SITE DELIVERY
☐ HOLIDAY DELIVERY
☐ RESIDENTIAL DELIVERY
☐ WEEKEND DELIVERY
☐ INSIDE DELIVERY

REFERENCE NUMBERS:
☐ LIFT GATE REQUIRED
☐ HOLIDAY PICKUP
☐ INSIDE PICKUP
☐ RESIDENTIAL PICKUP
☐ WEEKEND PICKUP
☐ SORT AND SEGREGATE Pieces

COD FEE
☐ Prepaid ☐ Collect

COD AMT \$ _____

CONSIGNEE CHECK ACCEPTABLE
☐ CERTIFIED CHECK OR CASH

REFRY COD CASH CHECK TOL

CARRIER LIABILITY: The carrier liability for loss or damage will be the lesser of (1) the actual value of the merchandise at delivery time, or (2) the amount of insurance covering the merchandise at the time of loss or damage. The carrier liability for loss or damage will be the lesser of (1) the actual value of the merchandise at delivery time, or (2) the amount of insurance covering the merchandise at the time of loss or damage. The carrier liability for loss or damage will be the lesser of (1) the actual value of the merchandise at delivery time, or (2) the amount of insurance covering the merchandise at the time of loss or damage.

SHIPPER'S DECLARATION: I hereby declare that the above information is true and correct to the best of my knowledge and belief, and that the goods are properly classified, described, marked, and labeled in accordance with the applicable regulations of the Department of Transportation.

Form name: KELLNERS FIREWORKS
Signed by: [Signature]

TRAILER NUMBER: _____

SEAL # APPLIED: _____

BEYOND SCAC: _____

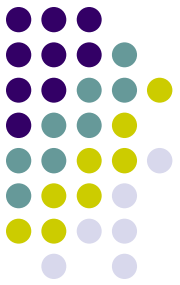
SHIPPER LOAD/ UNLOAD: _____

DATE RECEIVED: 10/25/11

UPS FREIGHT PRICE COUNT: 151

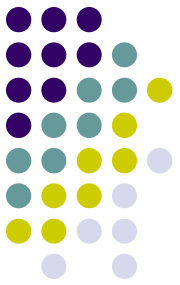
Sample

AFSL



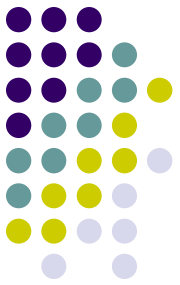
- The American Fireworks Standards Laboratory (AFSL) is an independent, non-profit corporation established to reduce the potential risk of injury associated with fireworks. In 2012, AFSL implemented a Product Evaluation and Certification Program for Professional Display Fireworks. The objective of this program is to ensure that AFSL certified products may be transported, stored and used safely.
- The AFSL Display Fireworks program includes a factory audit, product evaluations, and a shipping container loading supervision program for products manufactured in China to determine whether they were made in conformance with AFSL Standards. AFSL Standards ensure participating US importers that the Display Fireworks devices they import are made in accordance with applicable United States mandatory requirements for composition, construction, labeling and transportation.
- **LOOK FOR THE AFSL INSPECTION SEAL ON YOUR FIREWORKS**

Fireworks Insurance



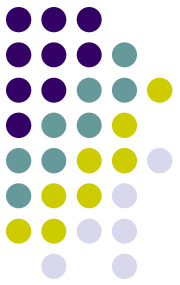
- Almost all venues require the Fireworks Display Operator to have General Liability Insurance sufficient enough to cover any potential claims. Many states have minimum requirements for this coverage.
- Typically, Fireworks Insurance Companies base their premiums on a percentage of a Display Companies projected venue. However, all Fireworks Insurance Companies have a minimum premium.
- Private haulers of 1.3g fireworks with a gross vehicle weight rating of 10,001 or more pounds or travelling interstate must have \$5,000,000 minimum public liability insurance.
- Private haulers of 1.3g fireworks with a gross vehicle weight rating of less than 10,000 pounds and not travelling out of their state are only subject to their states requirement for public liability insurance.
- All employees (office, laborers, drivers and shooters) must be covered by Workers Compensation Insurance. The coverage required is set by your state.

State & Local Requirements



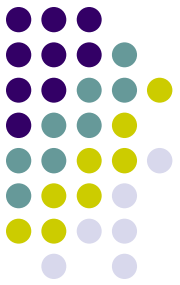
- State and Local Fireworks regulations can be more restrictive than Federal regulations but cannot be more lenient.
- Many states require Display Operators to take their state's certification program and pay a registration fee for the privilege of operating in their state.

Financing



- You have to buy product
- You have to store product
- You have to keep records of inventory
- You have to advertise/ give quotes
- You have to have staff
- You have to train staff
- You have to transport product
- You have to have equipment
- You have to have insurance
- You have to obtain licenses/permits
- WHAT IS THE #1 THING YOU'LL NEED TO DO THIS?

MONEY

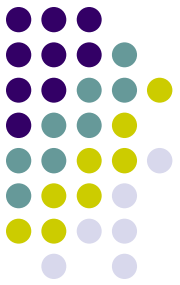


What a bank is looking for:

- *A Business Plan:*
 - Shows that you credibility and knowledge of your business.
 - Explaining why your business will succeed when others have failed.
 - Setting budget guidelines- showing how much money you'll need, what you'll spend it on and how much business you'd need to do to make a profit.
 - Many Universities have Business Development Centers that can help you develop a Business Plan at no charge.
- *Equity:*

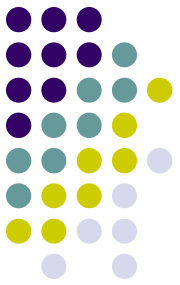
Most of the cash required to start a business will need to be provided from the principals themselves. A bank will require hard collateral such as property over inventory to help finance a start-up business.

Advertising



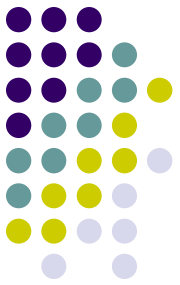
- Remember if you go out of business, the first thing you'll do is advertise.
- Donate a show for a worthy project.
- Help with fundraising activities.
- There is no such thing as over-publicizing your business or an event, but don't exaggerate.

Quoting to a Customer



- The primary goal of a business is to make a profit. Many new businesses fail at this because they do not know how to effectively price their products or services. You must understand the market for your product, your expenses and your competition before establishing prices. You must know all of your costs and carefully analyze them.
- The total costs of producing any service is composed of three parts:
 - a) material
 - b) labor
 - c) overhead.
- Don't forget to add in profit, the fireworks business is too hard of a business to forget that.

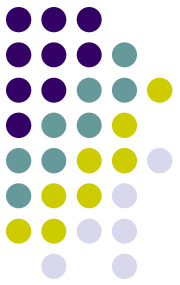
SHOW CONTRACTS



Should include:

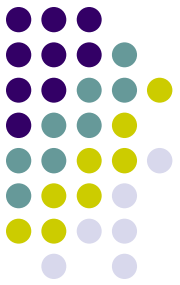
- Date of Show
- Location of Show
- Time of Show
- Payment Terms
- Insurance Provided
- Display Companies credentials
- Who is required to obtain local permission for show.
- Description of Display Site/ Plot Plan
- Who is to provide security
- Who is to provide cleanup.
- Cancellation/Postponement Policy. Is there a “rain date”?
- Emergency Contacts for both Display Company and Customer.

Final(e) Thoughts



- The body of any good fireworks display should consist of a wide variety of effects.
- When high entertainment value shells are fired one at a time, spectators don't mind waiting up to ten seconds between firing. However, if repeatedly firing the same shell, spectators will be bored and blame it on the show being fired too slow.
- A good display, that is the center of attraction for an event, should last no less than twenty minutes and no longer than thirty minutes.
- When a display has a larger budget, the number of shells discharged and the diameter of the shells (if allowed) should increase, not necessarily the duration.
- Saturation bombardment should be left to the end of the display.....
the Grand Finale. 1/3 to 1/2 of the budget of a show should be in the Finale.
- Usually, the last few shells on the end of the Grand Finale will be of the largest caliber used. The thought being that the last shells seen will be the ones most remembered by the spectators.

References



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