Government of South Australia
SafeWork SA

FIREWORKS
Use and User Competence

This technical note has been prepared as guidance for the holders of; a Pyrotechnician's Licence, an Exempt Display Permit, a Pyrotechnic Displays Business Licence and a Pyrotechnic Sales Business Licence.

Status of Technical Note
The information in this Technical Note is provided to offer guidance, it is not to be taken as a statement of law and must not be construed to waive or modify any legal obligations.

Introduction
This document provides a summary and explanation of some of the regulatory requirements relating to fireworks. It must however be read in conjunction with the *Explosives Act 1936*, the *Explosives Regulations 1996* and the *Explosives (Firework) Regulations 2001*. The Act and regulations prescribe the minimum legal obligations.

Additional Guidance Material
Additional useful guidance on the storage, handling, transport and use of fireworks can be found in:

• Australian Standard AS 2187.4-1998, Explosives-Storage, transport and use, Part 4: Pyrotechnics- Outdoor displays.

• Australian Explosives Code, 2nd Ed. 2000, Commonwealth of Australia.

• Pyrotechnic Reference Series No. 3, [ISBN 1-889526-03-7], KL and BJ Kosanke, 1995.

Administration
The explosives legislation and regulations are administered by Workplace Services, Inspectors of Explosives and members of the South Australian Police Force.

Fireworks Display Business
A fireworks display business can only be conducted by the holder of a Pyrotechnician's Licence or the holder of a Pyrotechnic Displays Business Licence.

Using Fireworks
A user of indoor fireworks must hold a pyrotechnician's licence. Outdoor fireworks can only be used by the holder of; a Pyrotechnician's Licence or an Exempt Display Permit. The licence or permit must be appropriately endorsed for the type and hazard level of the fireworks to be used.

Prior to using Fireworks
For each event or activity involving fireworks a written display plan must be prepared (Schedule 1 of the regulations).

The plan must show the following detail:
a) the nature of the site, proximity to buildings, structures and fire hazards,
b) crowd control,
c) the positioning and method of igniting the fireworks, and
d) the limits of the prohibited area.

The plan must be detailed enough to ensure the hazards are identified and the risks are assessed that are appropriate to the type of firework being used, and the type of display being undertaken.

Notification / Permission
1. Prior to each outdoor firework display notification to the Department must be made.

2. Notification is not required for an indoor firework display using indoor fireworks.

3. Permission should be obtained from the owner or body in control of the land on which, or premises in which, the display is to occur (including the Local Council if Council controlled land is to be used).

4. Civil Aviation Regulations require a pyrotechnician to gain permission from the Civil Aviation Authority in the following circumstances:
i) if aerial fireworks are to be fired within 3 miles (4.8 km) of an aerodrome
ii) if aerial fireworks are to be launched to height of greater than 400 feet, or
iii) if a display of lights could endanger the safety of aircraft.

Prohibited Fireworks
Sky rockets and single manually ignited firecrackers (bungers) are prohibited in South Australia.

Any firework with its own means of ignition is prohibited, this includes firecrackers with "match" or "striker" compound (these have the fuse replaced with match-head compound or similar, which is ignited by friction on the striker side of a match box).

Licensed pyrotechnicians may use strings of crackers as part of a cultural or religious event only.

Sale and Purchase of fireworks
Within South Australia, fireworks must not be sold by any person or company unless they hold a

Pyrotechnic Sales Business Licence.

Within South Australia, fireworks must be purchased only from people or companies who hold a Pyrotechnic Sales Business Licence.

Only a licensed pyrotechnician or the holder of an exempt display permit, a pyrotechnic sales business licence or a pyrotechnic displays business licence, can purchase fireworks. Such a person can only purchase fireworks of the type they are authorised to sell or use.

A licensed seller must verify the right of the purchaser to purchase a particular type of firework, and only sell to that purchaser those fireworks of the type they are authorised to purchase.

Transport of Fireworks
A vehicle transporting greater than 3 kilograms of fireworks of classification codes 1.1G or 1.2 G must be licensed for the carriage of explosives.

Where explosives of classification 1.2G and 1.3G are transported together, the combined load is regarded as 1.1G (see Australian Explosives Code Table 7.1) and should be licensed at 3 kg gross weight.

The vehicle carriage licence is issued to the vehicle owner.

Prior to a Firework Display
The safety of the public is the prime consideration at all times. In the event of an accident all those involved in organising, supplying or using fireworks may be held responsible. For this reason it is advisable for all parties to be covered by liability insurance appropriate to the type of fireworks being sold or used.

The regulations prescribe the minimum insurance cover required.
Prior to Outdoor Display
Residents in the area affected by the display must be notified well in advance of the display. It is common courtesy and good practice to warn people. It allows them to make arrangements to protect animals such as horses and dogs from injury or negotiate an acceptable outcome. This will minimise complaints and the investigation of those complaints by the police, Explosives Inspectors and other officials.

It is the responsibility of the holder of the relevant licence or permit, to notify neighbours. The noise from fireworks carries a long way. The regulations detail the minimum notification required, however it is good practice to ensure all those likely to be affected by the display are notified. This will include people with horses or other livestock in the area and the distance of notification may extend to 2 km or more.

Pyrotechnicians must exercise responsibility when choosing fireworks for a display. In particular salutes or fireworks containing reports should be confined to large public displays well away from residential or rural areas.

Conditions or circumstances may exist where it is unsafe to continue or commence a display, eg high winds or spectators entering the prohibited area. In such circumstances the display must be stopped until it is safe to proceed.

Conduct of Display
1. High explosives such as detonating cord, detonators, packaged blasting explosives and ANFO are <u>not</u> to be used in fireworks displays under any circumstances. This does not apply to suitably trained and licensed Special Effect † Pyrotechnicians, using explosives on motion picture sets that are closed to the public and for which specific approval has been received.
† **Note:** A Special Effect Display is one where the main entertainment is not the fireworks display itself, but where the fireworks are used as an integral part of a performance or similar event.

2. The minimum safety distances defined in Schedule 2 of the regulations apply to any person not directly involved with the fireworks display, ie other than pyrotechnicians and assistants. No other person, whether or not they are involved with the event with which the display is associated, is to be within those distances. This applies, for example, to musicians at concerts, sports players, racing vehicle drivers and crew, rodeo contestants, performers, photographers or cameramen etc.

Use of Metal or material likely to result in dangerous projections at a Firework Display
The regulations require; *tubes or mortars for fireworks, stakes, frames, supports or securing devices to which fireworks are immediately attached must not be comprised of or contain metal. Tubes or mortars must not be made of polyvinyl chloride.*

In the event of an unintended detonation of a firework, there must be no material between the firework and the audience that could result in dangerous fragments being projected towards the audience.

• Metal star pickets may be used for defining barriers for crowd control.
• Trailers may be used for the holding of firework items provided the sides are constructed of timber or other non-metallic material.
• The prohibition on metal does not apply to nails, screws, staples, wire or strapping used to secure non-metallic mortars, tubes, base plugs, racks firing lines etc.
• Steel posts and pickets may be used to support set-piece frames provided lances only are used and the set-piece is at least 5 m away from other fireworks.
• Steel posts and pickets firmly driven into the ground may be used to attach a timber post to which a firework such as a fountain or Saxon is attached. The firework

attached to the timber must be off-set from the metal so that no metal is between any firework and a member of the audience.
• Metal pegs driven fully into the ground may be used to secure racks and frames.

Elevated Displays
Elevated displays are far more dangerous than ground level fired displays. Safety distances must be greatly increased. The possibility of smoke entering air-conditioning, unpredictable and erratic winds around buildings must be identified and assessed.

For an elevated display a hazard identification and risk assessment must be undertaken and recorded.

Windy Conditions
In windy conditions the clearance distance used with aerial shells should be increased by at least the distances shown below on the downwind side of the display area. If this is not possible or the wind is stronger than 40 km/hr the display must not proceed. The contracting organisation should be advised of this possibility in advance to provide for such contingencies. Safety must always come first.

Typical shell drift in metres (m)

Wind	Wind Speed	Shell size 76mm (3")	Shell Size 152mm (6")	Shell Size 305mm (12")
Light Breeze Wind felt on face, leaves rustle, ordinary wind vane moved by wind	5 mph 8 km/hr 4 knots	16m	15m	17m
Gentle Breeze Leaves in constant motion, wind extends light flags	10mph 16 km/hr 9 knots	30m	32m	34m
Moderate Breeze Raises dust and paper, small branches move	15mph 24 km/hr 13 knots	45m	48m	52m
Fresh Breeze Small leafy trees sway, crested waves form on inland waters	20 mph 32 km/hr 17 knots	60m	65m	69m
Strong Breeze Large branches move, wires whistle, umbrellas difficult to use	25 mph 40 km/hr 22 knots	75m	81m	87m
Strong Wind	From 22 to 34 knots is a strong wind, firework displays should not be attempted in these conditions.			

Fallout from shell fragments and unexploded shell components
The above distances are for unexploded shells. The footprint of the debris fallout for shell fragments and unexploded shell components may be greater than the above distances. The prohibited area established by the pyrotechnician, must be of a size to ensure no debris falls on the spectators.

Angled Mortars
Mortars that are not aligned vertically will have a significant effect on shell drift and the clearance distances necessary to ensure a safe display. A two-degree tilt can send a 3 inch shell (76mm) around 13 m downrange. Two degrees represents a tilt of less than half an inch (10 mm) at the top of a 12 inch (300 mm) long mortar. It is not uncommon for a mortar rack to allow this amount of movement of the mortars. It is also very difficult to secure a rack to this degree of accuracy without using measuring instruments. A five-degree tilt will send a 3 inch (76mm) shell around 30 m downrange, effectively using up much of the required 65 m safety distance. A small tilt therefore requires clearance distances to be substantially increased in the direction of the tilt.

OPERATOR SAFETY
Fireworks are explosives. It is prudent practice that the number of persons handling and using fireworks should at all times be kept to a minimum.

Personal Protective Equipment
Pyrotechnicians and their assistants must wear appropriate personal protective equipment. The type of equipment selected must be dependent on the type of display and how it is to be initiated. The selection should be

based on a risk assessment under the Occupational Health and Safety requirements. The equipment should include:

• Eye protection including full face protection.

• Hearing protection- careful selection of hearing protection will still allow the firing of lifting charges to be heard clearly.

• Non-flammable clothing – full-length overalls and leather boots are recommended. Safety boots should be worn when handling heavy equipment.

• Safety helmet to protect against being hit by falling objects such as unexploded shells.

Fuse cutting
The use of scissors, pliers and side-cutters must be avoided. These types of cutting tools have been known to ignite quick match, probably due to the pinching and/or shearing action on powder grains. A fuse may be safely cut by using a sharp knife against a wooden or other non-sparking surface. Alternatively, cutters similar to those recommended for high explosives should be used. These are garden cutters of the blade and anvil type, ie the blade cuts against a flat surface (or anvil) made from plastic, brass or other non-sparking material. They should be cleaned regularly to avoid any build up of explosive.

Electric firing
Electric firing must not be attempted without specific training and the licence endorsed for such.
Electric fuseheads (electric igniters) are sensitive to friction, impact, radio transmissions and stray electricity such as static. Many accidents have been caused by rough removal of fuse heads from quick match or by dropping electrically fused fireworks.
Great care must be taken not to pull fuseheads from fireworks, and also to avoid crushing fuseheads when cutting fuse to remove them. Electric fusing operations (fitting or removing igniters) should be carried out remote from storage's of fireworks and the quantity of fireworks being worked on must be kept to a minimum (keep cartons of fireworks outside the work area and remove fused fireworks from the work area frequently).

AFTER THE DISPLAY
On completion of the firework display the pyrotechnician must ensure the area is left in a safe condition.

• Any remaining unfired fireworks must be removed and disposed of in a safe manner.

• The area must be thoroughly searched for any ignited materials, any fireworks that have been overlooked, misfired or the components of which have failed to function and fallen to the ground. The area must be checked again the following morning where available light prevents a thorough search.

• All debris, plus stakes, star pickets, wooden frames, mortars and packaging must be removed from the site.

LOG BOOKS (Record keeping)
Regulation 15 requires a log book to be kept by a pyrotechnician and regulation 16 requires a log book to be kept by an applicant for a pyrotechnicians licence.

• Unless otherwise approved, the log book must be bound and consist of consecutively numbered pages, entries must be handwritten.

Example of a log book format

Initial page details

Pyrotechnician (or applicant) details	
Name:	Mr James John Smith
Address:	14 White Street, Whiteville SA 5032
Pyrotechnician's licence number:	SAPYRO 007 (not applicable for applicant)

Details for specific event or activity involving the use of fireworks

Event organiser details (person who employed or engaged the pyrotechnician (if anyone))	
Name:	Fred Douglas Bloggs
Position (if any):	Secretary, Whiteville Football Club
Address:	12 Brown Terrace, Whiteville, SA 5001
Written Display plan:	Plan prepared 12 February, 2001. Plan no. 2001/01
Place of event or activity:	Whiteville Oval, 75 Green Street, Whiteville SA 5015
Date of event or activity:	22 March 2001

Name, address and duties of persons using fireworks under supervision of the pyrotechnician
(for an applicant a detailed description of their own duties, only, should be supplied)

Alan Graham Jones	22 Green Street, Brownville SA 5012	Spotting shells
Peter Stuart Smith	14 White Street, Whiteville, SA 5032	Firing and crowd control
John Arnold Bloggs	12 Brown Street, Whiteville, SA 5001	Set up and firing

Quantity and description of fireworks used
(for an applicant only those fireworks used by the applicant should be listed)

Quantity	Type †	Calibre	Item	Hazard Level *
5	Fountain	25mm	Golden Glitter Fountain	1
80	Fountain	25mm	Gerb (outdoor) – Silver	1
2	Roman candle	76 mm	8 Shot Comet Candle	4
20	Roman candle	12mm	Flash & Whistle Candle	2
5	Shell-in-mortar	20mm	9 Shot 76mm Shell	2
1	Multiple tube firework item	50mm	Poisonous Spider	2
60	Shell	50mm	Silver comet	3
12	Shell	75mm	Green comet	3
4	Shell	75mm	Brocade with flowers	3
3	Shell	50mm	Titanium salute	4
10	Shell	100mm	Single colour peony (green)	3
15	Shell	100mm	Single colour palm tree (red)	3
10	Shell	75mm	Colour spider web	3
5	Mine	50mm	Single colour mine (red)	2

NOTES:
† The type of firework must be selected from one of the types of fireworks on Technical Note 54 specifying Hazard Levels.

* The Hazard Levels are provided as examples only, the actual Hazard Level must be determined by the manufacturer, importer or supplier.

Misfires
1 x 75mm Green comet shell failed to ignite. Shell flooded with water, carefully removed for later disposal. 1 x low burst of 75mm Brocade shell. Remainder checked, no defects found.

For an applicant working under supervision of a pyrotechnician, the following additional information is required

Supervising pyrotechnician details	
Name:	Peter David Bloggs
Address:	16 Pink Terrace, Brownville, SA 5001
Pyrotechnician's Licence number:	A0236
Signature of supervising pyrotechnician (certifying the above entries are correct)	*PD Bloggs*

Records of displays are a valuable resource to the pyrotechnician. They may be particularly useful should a claim for damages arise. For this reason, the log book should also contain details of weather conditions, unusual incidents, people trespassing in the display area, complaints received and anything else that may be relevant.

ACCIDENTS, INCIDENTS AND NEAR MISSES

Any unintended ignition or explosion of an explosive (firework) is regarded as a ***Notifiable Dangerous Occurrence***, and must be reported to the Department, under the provisions of the Occupational Health, Safety and Welfare Act. The event must be reported as soon as possible by telephone or facsimile, and by written notice within 24 hours of the occurrence.

Any accident causing death, or an injury requiring in-patient treatment at a hospital, is an ***Immediately Notifiable Work-Related Injury.*** The event must be reported as soon as practicable by telephone or facsimile, and by written notice as soon as possible after the occurrence.

Any other accident or incident whether causing injury or not must be reported to an inspector of explosives within the Dangerous Substances Team of the Department.

Any theft of a firework must be reported to the Police and to an inspector of explosives within the Department.

Malfunctions
If a firework malfunctions and there is risk to the public, the pyrotechnician must immediately cease all fireworks operations and must not resume those operations until it is safe to do so.

Misfires
It is a requirement of the regulations that:

• *A misfired firework must not be approached within 20 minutes of the misfire, and*

• *A misfired shell in a mortar must be covered with water before removal.*

If the circumstances at the display site prevent this, then aerial shells in particular must not be used. This situation is likely to be encountered at sporting events and large agricultural shows, where the fireworks have to be cleared away quickly for the next event, leaving no time to deal with a misfire properly.

• Under no circumstances must misfired fireworks be disposed of by burning in an open fire.

Misfires can be 1 or 2 per thousand. Australian Standard AS 2187.4-1998 section 5.3, provides further information on dealing with misfires.

MANUFACTURE AND ASSEMBLY
A licence to manufacture explosives is required for any operation involving the following:

• A step or process for producing an explosive (eg star composition mixing).

• Remaking or reconditioning a firework (eg attaching a new lift charge to a shell to replace damaged powder).

• Altering the chemical or physical properties of an explosive (eg match fuse manufacture, granulation of meal black powder to make lifting or bursting charges, rolling or pumping star compound, priming stars and aerial shell manufacture).

• Breaking up or sorting out explosives (eg dismantling fireworks to recover stars or powder).

• Assembling mines from purchased stars and black powder.

• Preparation of any fireworks for sale to others.

• The modification of a manufactured firework for use for another purpose (eg manufacture of a sound/flash device for use by enforcement agencies).

• The modification of a pyrotechnic item for use as a firework (eg modifying a hand held flare for use in a firework display).

A licence to manufacture is not required for operations such as attaching fuses and electric igniters and chain fusing of shells.

The preparation of fireworks for use at a display must occur at the display site. Manufactured fireworks are packaged and classified by the manufacturer. They must be transported on public roads as packaged by the manufacturer. Fireworks must not be modified in any way or prepared for use by the pyrotechnician and subsequently repackaged and transported on public roads to a display site.

Black powder and flash powder are classed as mass explosives belonging to Division 1.1D. The holder of a Pyrotechnicians' Licence is not authorised to possess or use black or flash powder unless the licence specifically states so.

Chain fusing of shells
Chain fusing of shells must be restricted to shells of not more than 76mm, (3") in diameter, or length.

MORTARS

For salute shells the use of high density polyethylene (HDPE) or paper mortars is recommended.

Mortars for firing aerial shells (or other fireworks) must be robust and in sound condition and must be arranged and secured to prevent movement during firing and danger to persons due to premature explosion of the firework. All mortars must be inspected prior to the display.

Ranking of relative safety of mortars

Mortar Type	***Properties***
***** *Fibre reinforced epoxy (FRE)*	High strength, fragments generally low hazard.
***** *High density polyethylene (HDPE)*	Sufficient strength, fragments of moderate hazard.
***** *Paper/cardboard* (spiral or convolute)	Fragments of moderately low hazard.
Thick steel (schedule 40 steel pipe, seamed or seamless)	Generally can withstand an exploding shell, however if they rupture, produce dangerous fragments.
Acrylonitrile-Butadiene-Styrene (ABS)	Resilient plastic of moderate strength, fragments more hazardous than HDPE.
Sheet steel and aluminium **	Much less strong than S40 steel, and fail more often, at close range fragments are dangerous, maximum range is less than for thick steel.
Polyvinyl chloride (PVC) **	A moderate strength material, at close range the fragments are dangerous, maximum range is less than for thick steel.
Cast iron and ceramic tile pipe **	Low strength material, shatters to produce highly dangerous long range fragments.

***** Preferred construction
** Must not be used

GUIDELINES ON APPROPRIATE PRACTICAL EXPERIENCE AND INSTRUCTION (per regulation 12) for applicants for a pyrotechnician's licence.

Competence
To obtain a licence or exempt display permit an applicant must demonstrate competence to the satisfaction of an inspector of explosives. The level of competence will differ depending on the type of fireworks for which a licence or permit is sought. While the following requirements are provided as guidance to the type experience that will be expected of an applicant, the requirements will be administered with discretion.

Fireworks are Class 1 dangerous goods under the United Nations system for the classification of dangerous goods. Competence in the use of explosives is developed only through practical experience and instruction. This always occurs through one-to-one mentoring. In South Australia there are currently no competency based training courses in the use of explosives. Fireworks use is a part-time activity for the majority of those involved in the industry. It is usual for the operators of the largest display companies to have other sources of income.

It is usual to demonstrate competence in the form of appropriate instruction and suitable experience. This involves demonstrating, for the use of the fireworks for which a licence or licence renewal is sought that:

- instruction has been received, and
- practical experience of a sufficient standard has been obtained.

Experience in the use of fireworks must be demonstrated by log book entry.

1 Instruction The applicant must obtain a statement from the firework supplier (or suitable agent of the supplier) stating that the applicant has received instruction in the safe use of the fireworks to be supplied.

The statement must detail the type of instruction supplied and the date, time and place where the instruction occurred. If a pyrotechnician wishes to use fireworks from multiple firework suppliers then they must receive a statement from each of the firework suppliers regarding instruction received.

2 Practical Experience - For Outdoor Fireworks Fireworks for outdoor use are divided into four hazard levels. The details of the fireworks that comprise each hazard level are contained in Technical Note 54 - Firework Hazard Levels. The following requirements are indicative of the experience that will be expected of an applicant.

Hazard Level Experience for Entry and Progression (Indicative)
The following are indicators of the experience expected to be demonstrated by an applicant. In individual circumstances, the department will use its discretion, based on the evidence provided to it to make a determination about the issuing of a licence. Applicants who do not strictly satisfy the criteria below may still be able to demonstrate the depth of their experience in other ways.

1	Thirty displays spread over three years, under supervision of a pyrotechnician is required to obtain a licence endorsed for Hazard Level 1. A letter must be supplied from the supervising pyrotechnician, stating that the applicant has demonstrated competence in the use of Hazard Level 1 fireworks.
2	Ten displays spread over two years at Hazard Level 1, under own licence, is required to proceed to Hazard Level 2. In addition, a letter from a supervising licensed pyrotechnician must be supplied stating that the applicant has demonstrated competence in the use of Hazard Level 2 fireworks, and has been supervised in their use at a minimum of ten displays over the previous two years.
3 and 4	Five displays spread over one year, under own licence, is required to proceed to Hazard Level 3 or 4, and to proceed to a greater aerial size within a hazard level.

Renewal (Indicative)
• Five displays each year under own licence, is the expected minimum for renewal of the licence for the existing endorsements.
• Where five displays each year cannot be demonstrated, under own licence, the applicant may not have retained their knowledge and skill at that hazard level and the licence may be renewed at the next lower hazard level or aerial size.

OUTLINE OF THE HAZARD LEVELS - For Outdoor Fireworks

Hazard Level	Description	Firework Type	Not allowed	Allowed
1	Ground-level (function to 20 m height, 25 m diameter)	Ground level.	◆ no aerial ◆ no salutes ◆ no maroons ◆ no electrical ignition ◆ no set pieces	-
2	Low-level (function to 60 m height, 50 m diameter)	63.5mm (2.5") aerial.	◆ no salutes ◆ no maroons, ◆ no multi-break shells (shell on shells) ◆ no component shells (peanut shells)	◆ electrical ignition if trained ‡‡ ◆ set pieces for ground level
3	High-level (function over 60 m height, to 200 m diameter)	76mm (3") aerial. 102mm (4") aerial. 152 mm (6") aerial.	◆ no salutes, ◆ no maroons ◆ no multi-break shells	◆ component shells
4	High-level, wide-burst (function over 60 m height, over 200 m diameter)	203mm (8") aerial 254mm (10") aerial. 305 mm (12") aerial.†	-	◆ multi-break shells ◆ component shells ◆ salutes to 76 mm ◆ maroons ‡

‡‡ Electrical ignition competence must be demonstrated by a letter from the firework supplier that the pyrotechnician is trained and competent in the use of their product and firing system. Approval for use of electrical ignition at this hazard level applies to ground level as well as low-level fireworks.

‡ An endorsement for Salutes to 76mm (3") can be issued at this hazard level, if instruction is demonstrated. Approval for use of maroons at this hazard level allows use at ground level displays as well as low-level and high-level displays.

† The use of aerial fireworks over 305mm (12") is subject to a hazard identification and risk assessment, approval is valid for a particular event only.

Indoor Fireworks and Special Effects Fireworks

Depending on the nature of the pyrotechnic items the applicant wishes to use, an applicant must demonstrate suitable instruction, training and experience to the satisfaction of an inspector of explosives, prior to a licence being granted. Indoor fireworks licences are issued for:

i) electrically initiated manufactured fireworks, and
ii) flash powder.

Training and Interstate Experience

Where an applicant has received training in the use of fireworks by completing a course, the details of the course and participation details must be supplied.

Interstate / overseas licences will be recognised at the equivalent level, if the pyrotechnician is able to demonstrate satisfactory operation over a prior two-year period. A newly issued interstate licence will not be recognised in South Australia.

TRAINING AND COMPETENCE

Where fireworks are supplied by sale to a person for their use that person must have received training in their use.

The trainer must assess the competence of each person they have trained and provide that person with a written training statement stating the date, time and place where training occurred and that the person has demonstrated competence in the use of the type of fireworks for which training was provided.

Training must be comprehensive and cover the following elements as relevant:

Legislative requirements

- Legislation, Standards and Codes
- Transport on Operator's vehicle
- Storage of Fireworks
- Labelling/instructions
- Licences, Permits and Notifications
- Public Liability Insurance
- Licence conditions
- Prohibited Fireworks
- Definitions and terminology (incl ground/aerial)
- Sale and Purchase of fireworks
- Record keeping

Display provisions

- Assistants, numbers and training
- Personal protective equipment
- Clearance distances
- Site requirements
- Site security/safety
- Crowd control
- Conduct of display

Types of fireworks and types of displays

- Indoor fireworks
- - Flash powder
- Ground display fireworks
- Aerial fireworks
- Mortars
- Aerial loading
- Aerial firing
- Aerial reloading
- Trailers for aerials
- Electrical firing

General Safety Provisions

- Theft or loss
- Fire prevention
- First Aid
- After the display
- Misfires
- Accidents, incidents and near misses
- Disposal