



DLRA AERO MEDICAL EVACUATION PROCEDURE

Introduction

The Dry Lakes Racers Australia Inc. (DLRA) is committed to providing the best possible medical, fire and rescue services to its competitors and their crews and to the general public during Speed Week held annually at Lake Gairdner in outback South Australia.

Aim

This document is one of a number of documents which outline the responsibilities of the DLRA, its officials and volunteers; it specifically describes the procedures to be followed where an aero medical evacuation from Lake Gairdner and its environs is required.

Duties

- At least one month before the event the DLRA President is to provide the Royal Flying Doctor Service (RFDS) with coordinates for the temporary landing strip on Lake Gairdner, the date of the event and to confirm the loan of the landing lights.
- In the days prior to Speed Week the Ground Liaison Officer is to pick up the landing lights from the RFDS at Port Augusta.
Contact:
Address:
Phone:
- The Ground Liaison Officer is then to check the landing lights that they are all functioning correctly and notate on the sheet provided. A copy of the night landing procedures for setting out the landing lights is to be stored with the landing lights at all times.
- The Ground Liaison Officer is to transport the landing lights to the event and store them safely in a location that is easily and quickly accessible if required.
- The Ground Liaison Officer will return the landing lights after the event.

In the event of an incident

- a. On notification from the registration van that an aero medical evacuation has been requested the DLRA Ground Liaison Officer and his crew are to expedite the preparation of the emergency landing ground (DLRA Track 1).
- b. If the RFDS aircraft is expected to arrive in low light conditions, they will deploy the RFDS landing lights as specified in the night landing procedures.
- c. The DLRA Ground Liaison Officer and his crew will marshal the aircraft when it lands and be prepared to assist the aircraft crew in its departure.

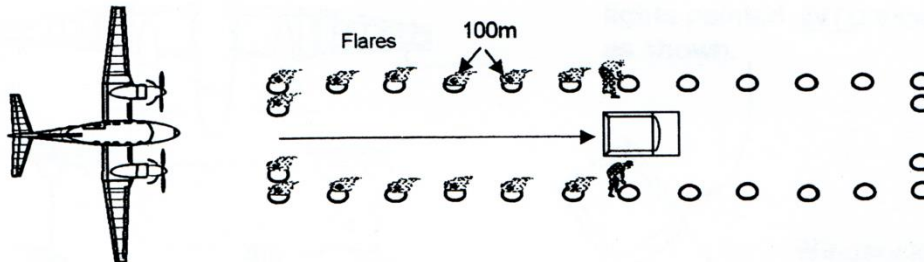


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Night Landing Procedures

ACTIONS TO BE TAKEN BEFORE AIRCRAFT ARRIVES :-

1. Light Flares as per the diagram below and on other side
 - Flares are required to be lit at least 30 minutes before the estimated time of arrival of the aircraft.
 - Remember that an aircraft lands INTO wind.
 - Start lighting flares at the end which the aircraft will land, then continue towards the opposite end.
 - Use the vehicle trip meter to determine 100 metre spacing between flares.



2. Illuminate the windsock. Use the Vehicle lights as per the diagram (next page). Ensure vehicle is parked into wind to prevent lights blinding pilot during landing.
3. A listening watch is required to be maintained on the radio or phone. (please advise the RFDS Base the radio type ie HF or UHF and Freq or channel you will be using).
4. When aircraft is about five minutes out, the airstrip should be driven to ensure it is clear of all wildlife and stock. (If only one vehicle please remember to return to the wind sock after inspection)
5. Remember :-
 - a. Vehicles must not be parked in line with the strip ends or within 30 metres from the strip side.
 - b. Remain clear of the aircraft until the engines have been shut down.
 - c. Please avoid shining car lights directly at the aircraft cockpit, as this can be detrimental to the "night vision" of the pilot.

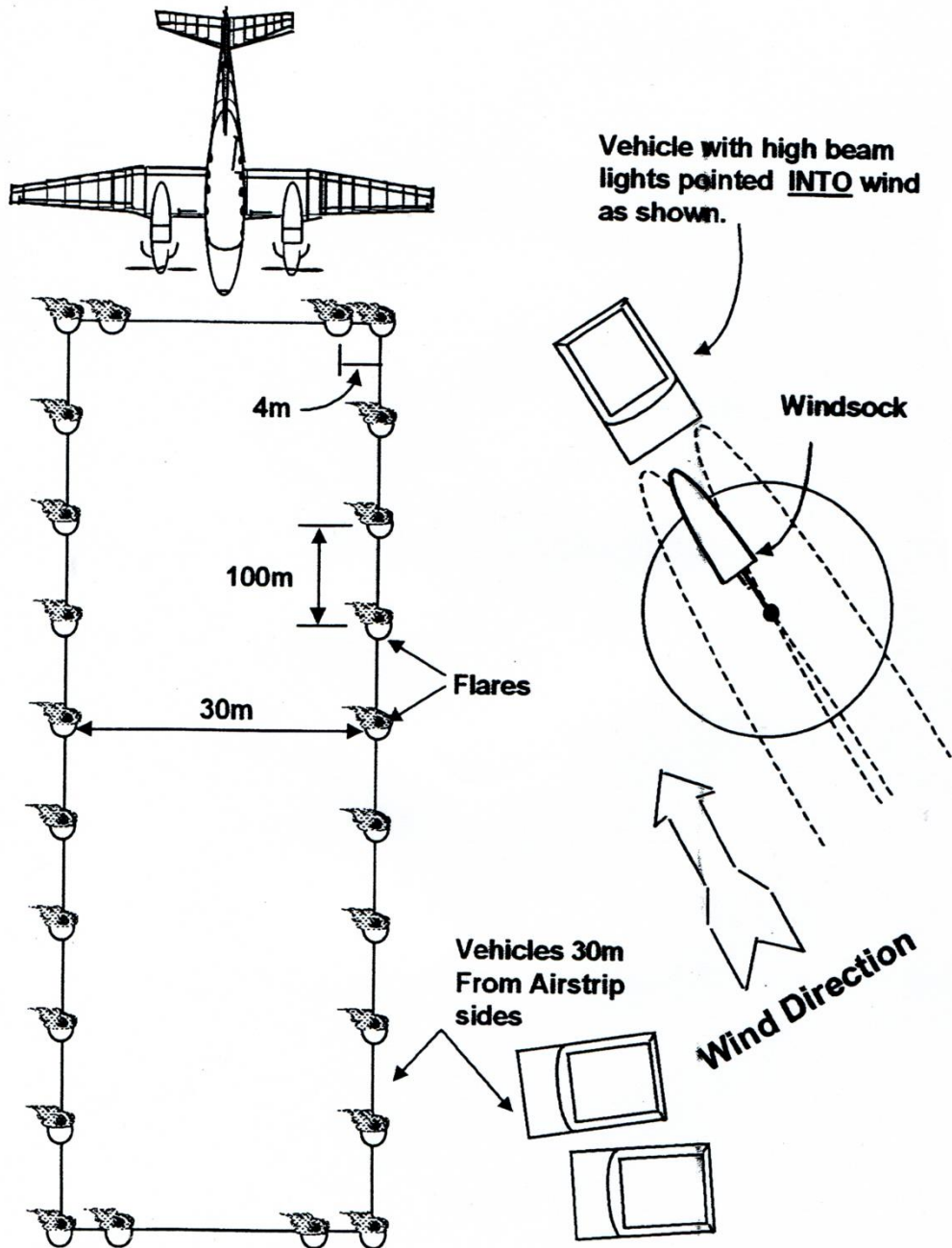
AFTER THE AIRCRAFT DEPARTS :-

1. The flares are required to be left lit for 30 minutes after the aircraft departs. This will ensure the safe return of the aircraft should it suffer an emergency after departure.



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Diagram Of Flare Layout For Night Landing





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RFDS Port Augusta

Battery Powered Standby Lighting

Date of Check: 23/02/2016

Checked By: P Remilton

Light 1:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 2:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 3:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 4:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 5:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 6:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 7:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 8:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 9:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 10:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 11:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 12:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 13:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 14:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
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Light 23:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
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Light 25:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 26:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 27:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 28:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 29:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable
Light 30:	<input checked="" type="checkbox"/> Serviceable	<input type="checkbox"/> Unserviceable	<input type="checkbox"/> Required Rectification, Serviceable

RECTIFIED
29/2/16
DLRA
TOM #74



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A E R O A S S O C I A T E S

Phone & Fax Free Call 1800 02 22 77

SPECIAL NOTES FOR OWNERS/USERS OF CL-18 RUNWAY LIGHTS

Your CL-18 Runway Lights are remarkably robust, and with normal care should offer many years of excellent service.

All plastic parts are impregnated with ultra violet protectors, and are not greatly damaged by intense sunlight.

Our tests indicate that lamps left on a central Australian strip for two years, show some slight colour fade, but were still in perfect working condition, and batteries we still excellent.

BATTERIES:

Both Ray-O-Vac and Duracell Alkaline batteries have a shelf life exceeding 5 years, and from this point will still retain 85% of power after 5 years. The batteries will function well from -20C to +60C and the batteries need not be removed from the lamps, until replacement is required.

Our tests show that the Ray-O-Vac batteries offer about 27 hours constant acceptable light, and Duracell about 22 hours.

When used for an hour or two at a time, the battery life is extended, the best we had with Ray-O-Vac was 39 hours under controlled conditions, but I would expect under field conditions this to be more like 33 to 35 hours for intermittent use.

When the batteries are down to 10 to 15%, the cells tend to build up a resistance and become warm with use, this is a good indication of approach of battery "end of life".

A good practise is to, in some way, mark one lamp only, which is put out and switched on first, and collected and switched off last, the battery life of this lamp will be a fair indicator of batteries nearing the end of their useful life.

After battery fitting; if a lamp seems dull, this often indicates that one cell is incorrect polarity, this will greatly reduce battery life, apart from giving poor light output.

If with batteries correctly fitted, the lamp will not switch ON, firmly bump the base of lamp with hand as this tends to settle batteries into correct place within the battery case.

BULBS:

A spare bulb is supplied for each unit, The bulbs are made only for the CL-18 lamps and are a GE #425 Krypton gas MES bulb.

We do not recommend using any other bulb types.

Each bulb is tested before shipping, but with any bulb, there is the occasional "dud" that gets through. We are pleased to replace, at no charge any bulbs that have a short life.

Our tests of 200 bulbs (under controlled conditions) indicate that better than 150 hours can be expected from each bulb.

With our test of 200 bulbs, we had 6 fail in 168 hours (1 week) which relates to 3%. Two of these bulbs failed within the first 30 minutes.

Spare bulbs are \$1 each and available in Clear, Orange, Green, Blue, Yellow or Red. Bulbs are Post Free.

REPLACING BULBS:

Bulb replacement is simple: Release side retaining straps, and remove white top from green battery case, withdraw the switch body/bulb disc from lamp cage, remove bulb by turning counter clockwise, and screw in new bulb,



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If new bulb is loose in housing, remove bulb and make a slight bow in side metal connector, that contacts bulb thread, then re insert new bulb.

TIE DOWN LOOP:

Use the built in metal tie down loop if the lamp is used in aircraft run-up bays, or for helicopter pad use, a simple metal tent peg, or nylon or wire tie to a brick which is normally enough to stop lamp being blown over.

WET CONDITIONS;

The lamps will self drain any condensation moisture via the tie down loop holes in the green battery case.

It is not intended that the lamps be fully submerged or placed in a puddle, as this will cause battery problems and internal rust.

CARE & MAINTENANCE;

Your CL-18 runway lamps require no special care or attention.

The lamps may be hosed down with batteries installed, as long as the lamps are kept base down in order to drain.

For mud and muck, insects and grass stains, simply use a bucket of warm soapy water and a small brush such as a dust-pan broom brush, but do not immerse the light.

HINTS AND TIPS (from our users)

For quick placement and retrieval of lights, a plastic cable tie through the upper cage, forming a 2 inch (50mm) loop, makes the lamp easy to place and recover from a vehicle in combination with a broom handle with a wire hook on one end, as the lamp can be slid down the shaft for placement and the reverse for recovery.

REFLECTIVE BAND NOTES;

The high intensity reflective band used on the switch body of CL-18 lamps is self adhesive. This is installed simply as a back up in the event of a blown bulb, and can be seen when within the reach of the aircraft lighting as in take off and landings.

The band colour is the same as for the bulb colour, use only the bulb colour as indicated by the band as an incorrect bulb colour can give confusing or false messages to a pilot.

The reflected return of light is 80% within a 2 degree angle (very directional) and 15% two degrees either side of the middle 2 degrees, beyond these angles only 5% of light is returned.

Spare reflective bands of 250 mm are always available in White, Orange, Green, Yellow, Blue & Red.

Your CL-18 runway lights have been made in such a manner, that no aircraft damage is likely should a lamp be run over or in the event of a prop strike. Lamp replacement is less expensive than aircraft damage or aircraft tyres.

Be aware that dropping the lamp on a hard surface, may cause damage or malfunction of the lamp.

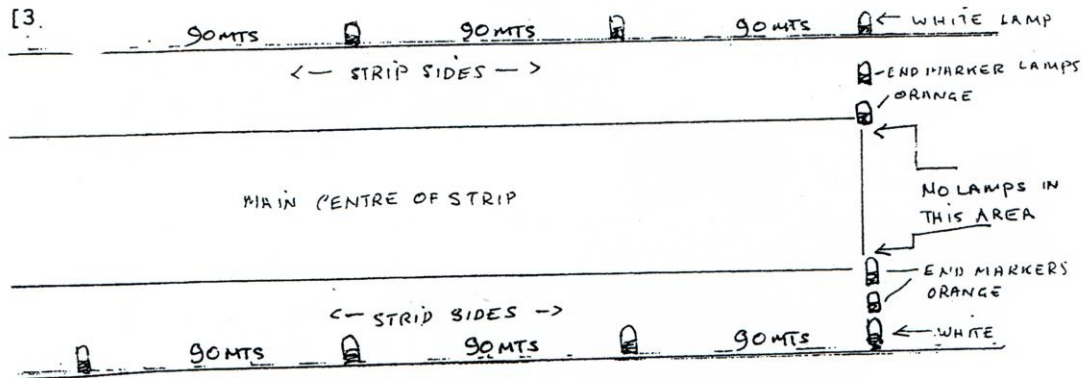
SPACE BETWEEN LIGHTS;

To simulate council and city airport lighting, lamps should be spaced at 90 mts (100 yds) each side along the strip outer margin. End marker lamps (Orange) should be placed at each end within the white side lights, two on either side at 90 degrees to the side lights. These should be placed either side, at 90 degrees to the last white strip side light and spaced so that the mid two indicate to a pilot the centre width of the usable strip. see diagm on page 3:

If the strip is a "one way strip", due trees or high terrain, use orange lamps at the obstruction end, and green lamps at the landing and take off end.



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LAMP COLOUR:

WHITE:	For either side of runway strip at 90 mt spaces.
ORANGE	End markers only.
GREEN	End markers for approach end of a "One Way" strip.
YELLOW	For Air Ag use where insects are a problem or where there may be a proliferation of white light on ground.
BLUE	Taxiway, parking and tie down areas only.
RED	Danger areas Only - Ditch - Soft Ground - Tie Down Posts or dangerous obstructions.

A NOTE ON RED LIGHT:

Although red light does not have a great effect on night vision, being of a very long wavelength the red light tends to pass through the CL-18 frosted lens, without illuminating the dome. (Hence the choice of Orange for end marker lamps) the red bulb is seen as a spot of light within the lamp and is suitable only for short distance use, as the light can be seen for only one third the distance of other colours.

VISIBILITY:

Your CL-18 runway lamps are visible from the air in excess of 5 nautical miles, greater in clear conditions, and possibly less in areas of heavy haze, smoke and/or dust.

The intention of a runway light is to "mark the position" of the lamp, and thus the runway, a bright light may be seen for a greater distance but would have an adverse effect on a pilots vision in the take-off and landing where night vision is most required.

The clear lens ring in the top of the lamp, offers the pilot a brighter light to the vertical.

When using CL-18 runway lamps, insure that all vehicles are parked a good distance from the runway / strip, taxi and parking areas, with vehicle headlights off but interior cabin light on, so the pilot can in fact see the vehicle position.

Automotive headlights can blind a pilot who's eyes have well adjusted to low light conditions.

Never shine a torch at an aircraft, to indicate your position, shine a torch on yourself, so the pilot can see where you are.

It is more difficult to judge distance at night and shining a torch at the ground is of little use.



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OTHER AIRPORT ASSOCIATED PRODUCTS:

Large reflective safety triangles, red one side, white the other, used to mark danger areas, fence-lines at the end of the strip and the like. These are self standing or may be attached to a fence line. 430mm sides and stands 440mm high. With protective cover sleeve.

Order No. X KH306/DUAL Price \$21-50 each

Strobe Light Yellow: A almost pocket sized Amber/Yellow strobe light that is only 100mm high and 70mm diameter, fitted with long cable and 12v cigarette lighter plug and magnetic base. Visible 360 degrees with a flash rate of 85 per minute. Attach to vehicle roof to greatly extend visual range of airstrip for incoming pilots.

Order No. X CAX-30M Price \$45 each

Amber Rotating Beacons also available at \$59 for 12 volt 20 watt, 155 mm high and 100mm diam with magnetic base, coiled cord and cigarette lighter plug, a well made unit. Order X SD-12 \$59 each

Or 12/24 volt 55 or 100 watt flair base full size unit, with 3 mt of heavy duty cable, and cigarette lighter plug. Very bright for extreme long range, can be seen up to 30 nautical miles, most suitable for very remote areas.

Order No. X GF 8.8 (state voltage) \$79 .

These must be switched off when aircraft on approach, as these are a high intensity light.

Powerline Aviation Markers (PAM) Aviation Safety Orange (R11) Powerline Marker Balls, aviation sizes are 20, 24 and 30 inch, request spec's sheet.

Safety Glow Wands (Marshalling Wands) 21mm (8 1/4 inch) conical tube fits most hand flashlights (torches) heads gives even glow of light for directing aircraft or traffic at night.

The tip is removable so the torch may still be used. Made by Ray-O-Vac (USA) and are almost non breakable Also excellent for roadside emergency use. Available in Tango or Yellow

Tango = Order No. W8-RED \$4-50 each
Yellow = Order No. W8-YELLOW \$4-50 each

Ray-O-Vac industrial magnetic 2 D cell Heavy Duty impact resistant and gas proof flashlight (torch) including Alkaline batteries and choice of Tango or Yellow safety wand.

Order IM2-KML-W8R For Tango \$19-00
or Order IM2-KML-W8Y For Yellow \$19-00

These torches use the same "D" cell batteries as the CL-18 lamps.