

# INSTRUCTION MANUAL

## Cirro Strata CS6 Mist Generator

### INTRODUCTION

The Cirro *Strata* is a professional mist generator for producing sufficient airborne reflection particles to enable effect lighting to be seen. It has been developed for applications such as Clubs, Discos, Film and TV location work, Theatre, Ballet and Concert Tours. For very large studios and arenas consideration can be given to the larger Cirro MK3 model, available especially for this type of work. The *Strata* is totally self contained, and all that is required for operation is a supply of mains power and sufficient fluid in the tank.

The Cirro *Strata* has been developed from the well established Cirrus generator which has been extensively used by many TV, film, promotional and touring rock shows. It has been COSHH tested and approved for use in areas of public entertainment.

To ensure proper operation it is advisable that you read fully the following information and fully understand the method of achieving proper distribution of the mist, and at the proper concentration.

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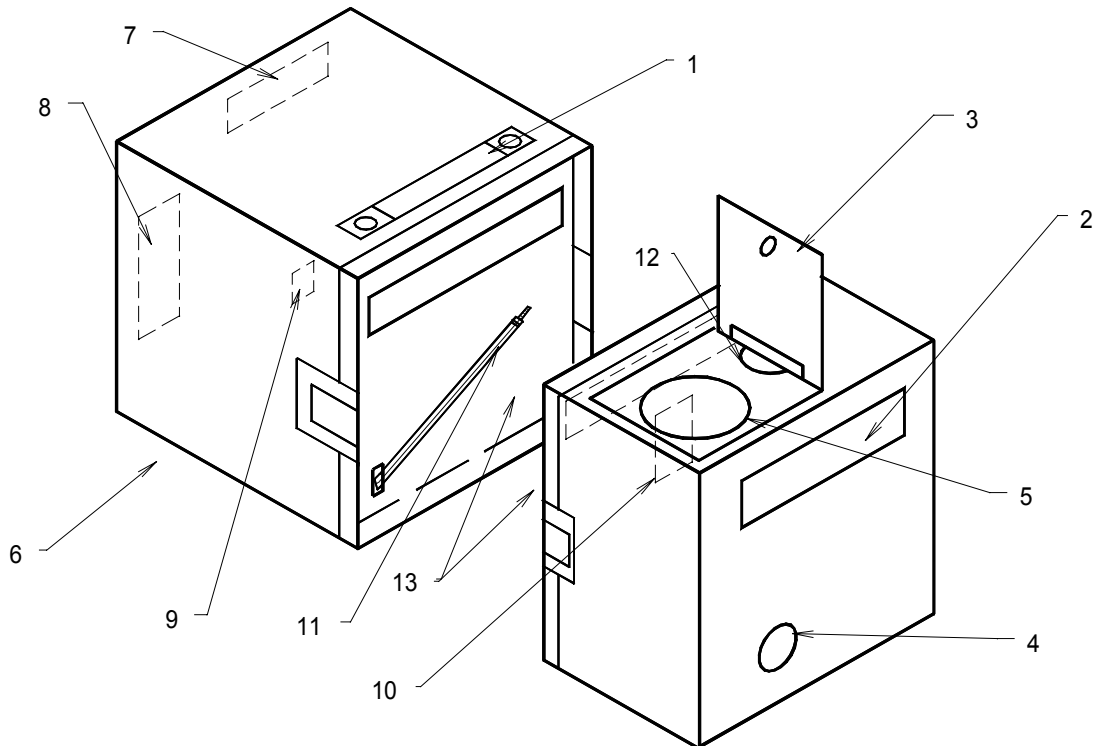
### UNPACKING

As part of our quality control system this product is carefully checked prior to dispatch. Supplied with the *Strata* will be an IEC mains power cord. Please check that you have received this item, and contact your dealer immediately should this not be the case, or should the unit have suffered transit damage.

**WARNING:** Do not connect power to the unit and switch on until you have read through the mains power and operating instruction section of this manual.

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## FEATURES AND CONTROLS



1. Carrying handle.
2. Side outlet for mist. Top flap (3) needs to be closed for mist to exit here.
3. Hinged top flap and upper mist outlet. Secured with coin operated quarter-turn fastener. Also provides access to the tank screw cap and silencer bung.
4. Fluid level indicator window. Level should be held within the range of this window. Overfilling beyond the top of the indicator reduces performance and quality of mist output.
5. Tank screw cap. As a safety precaution, always remove before connecting the *Strata* to a mains supply. The silencer bung is located underneath this cap, as a push fit into the neck of the tank outlet.
6. Inlet vent for cooling air located underneath case. Ensure at all times that there is no obstruction.
7. Control panel. Mains switch illuminates when power is applied and switch is in the ON position.

8. Cable tidy. A convenient storage place for the power cord.
  9. IEC mains socket. Includes integral 20mm mains fuse rated at T3.15A
  10. Location of air filter, secured to bulkhead. Air supply hose connects to filter input via a Quick Connect socket.
  11. Air supply hose. Free end connects directly to the air filter (10) input or via an extension hose.
  12. Safety bung. Acts as a safety pressure relief valve to protect against tank explosion in case the *Strata* is left powered up whilst screw cap is in place.
  13. Location of serial number on the bulkhead panel of both cases.
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## **MAINS POWER**

The generator is designed to operate off a single phase 220-240V 50 Hz <sup>1</sup> AC supply capable of supplying a minimum of 300W. A suitable IEC mains lead is supplied with the unit.

**WARNING: THIS APPLIANCE MUST BE EARTHED.**

The wires in the mains lead are colour coded in accordance with the following code:

Green - and - yellow	Earth
Blue	: Neutral
Brown	: Live

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is colour coded green-and-yellow must be connected to the terminals in the plug which is marked with the letter 'E' or by the earth symbol which is '⏏', or which is coloured green or green-and-yellow.

The wire which is colour coded blue must be connected to the terminal which is marked with the letter 'N' or coloured black.

The wire which is colour coded brown must be connected to the terminal which is marked with the letter 'L', or coloured red.

## **MAINS FUSING**

The mains power fuse is located underneath the IEC connector in a small carrier. Access is gained by first removing the IEC power cord and then using a flat blade to unclip and withdraw the fuse carrier. The fuse is rated as 20mm 250vAC T3.15A, and a suitable spare is also provided. If this needs to be replaced it is essential for proper protection that it is replaced with one of the same specification. Should the fuse continue to blow, then internal damage has occurred and the whole unit must be returned to your dealer for service.

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<sup>1</sup>110v and 60Hz versions available to special order.

## **OPERATION.**

**WARNING:** Before applying power to the unit and switching on, open the flap (3) on the top of the tank case and remove the screw cap (5). Keep this in a safe place and be sure to replace it during transit, or during long periods of non operation.

1. Site the *Strata* in a well ventilated area.
2. Remove the power cord from the cable tidy (8), and plug into IEC connector (9) ensuring first that the mains power switch on the control panel (7) is in the OFF position.
3. Open flap (3) and remove the screw cap (5). Check the fluid level to be within the lower and upper limits on the viewing window (4). Refer to routine maintenance section of this manual if necessary. **OVERFILLING REDUCES PERFORMANCE and QUALITY OF MIST OUTPUT.**
4. If a mist is required in a specific area, such as a dance floor or a particular area on location, CLOSE flap (3). Turn mains power switch ON and mist will immediately start to emerge from the side mist outlet (2).
5. If a more ambient mist is required, leave flap (3) OPEN. Turn the mains power switch ON and mist will immediately start to emerge upwards from the machine.
6. Avoid operating the unit such that the room or venue becomes too heavy with mist. The maximum acceptable level will be when the mist is just visible to the eye. Please refer to the useful tips section of this manual.

**WARNING:** The tank top has a pressure relief bung (12) which is designed to prevent excess pressure building up in the tank, should the *Strata* be inadvertently switched on, with the screw cap still in place. This is for safety reasons only, and good operational practice should be used to ensure that the screw cap is always removed, prior to applying mains power. If the screw cap has been left on with the compressor running, the relief bung is likely to have blown out. Simple refitting should restore the unit to full specification, but thorough inspection is advisable to ensure the tank has not become distorted or the tank/lid rubber seal has ruptured, causing fluid leaks if tipped.

**WARNING:** Ensure the fan grill (6) does not become blocked as this will lead to excessive internal temperatures and shorten the working life of the compressor.

**WARNING** Always travel the machine with the printed arrows pointing upwards. This is necessary to avoid accidental spillage of the fluid, although short term tipping should not produce any leaks if the screw cap is securely fitted. The *Strata* is equipped with a centrally placed carrying handle, provided for ease of moving over short distances.

## OPERATIONAL TIPS

1. Always use Cirrus/Cirro fluid. Operation with any other liquid will invalidate the guarantee and invalidate the COSHH health and safety approvals for the unit.
2. The Cirro *Strata* machine incorporates the CIRRUS system which has been COSHH tested in the UK. It is on the approved list for use in areas of public entertainment. Certificates are available for inspection if required.
3. The machine will provide a fine even mist. The recommended level for use in an eight hour day is 5mg/CuM (reference OSHA), and this represents a fine mist, NOT fog or smoke. When the mist is just visible with the eye, this represents a maximum working concentration.
4. Position the *Strata* downwind of the prevailing draught, If required an additional fan can be used, but this must always BLOW the mist. Never extrude the mist through the fan as this will result in loss of output and heavy fluid build-up on the fan blades.
5. The mist will always rise or fall to the coolest areas. In very humid conditions, use of a heavy duty fan might be required to avoid the mist becoming localised.
6. Never use a hose on the tank top output (5) as this will result in loss of output.
7. It is NOT important to position the tank near to where the mist is required as this type of effect is ambient rather than localised.
8. When the desired effect is achieved, switch the machine off, and then switch on again as necessary. Do not just leave the machine running as this will result in too high a concentration of mist. Since the desired effect will be dependent on the Directors requirement and ambient conditions of temperature, humidity and prevailing draughts, it is suggested that some experimentation is carried out prior to use.
9. NEVER block the supply of air to the fan located on the underside of the compressor case. This is essential for the cool operation of the compressor as well as providing air for the compressor input.
10. The tank output incorporates a removable foam silencer pad. Should the absolute maximum mist output be required then this filter can be removed, although audible tank noise will increase slightly and fluid residues will need periodic wiping from the tank top plate.
11. If absolute quietness is needed, the *Strata* case should be split so that the compressor section can be remotely sited. Extension hoses are available as optional parts. Refer to the section 'Two Part Operation'.
12. The air supply to the tank is filtered to remove any moisture content. The filter is located on the bulkead panel of the tank case and is supplied set for automatic draining. The small amount of water collected will drain through the pipe onto the floor beneath the case. In situations where this is not acceptable the drain should be locked off by rotating the knurled ring on the base of the filter cup, to the right. Regular draining should then be undertaken by temporarily resetting the knurled ring to the automatic position with the unit switched off.

## **ROUTINE MAINTENANCE**

1. **FLUID LEVEL** . Check level in tank before use. For correct operation the level should be within the upper and lower limits of the viewing glass. **OVERFILLING WILL REDUCE MIST OUTPUT.**
  2. **COOLING FAN.** Check that the fan is running correctly and that it is free of dirt and dust. It provides the air necessary for the compressor input, as well as air for temperature control.
  3. **COMPRESSOR.** There is no routine maintenance required and no attempt should be made in any way to oil or service this unit. The compressor motor has its own over-temperature cut-out system to protect it from excessive heat.
  4. **TANK.** There is no routine maintenance required. Should the level of mist become decreased over time then the internal nozzles might have become blocked. Assistance should be obtained from your local distributor quoting the units serial number.
  5. **MIST SILENCER.** Located in the tank output funnel as a foam bung. To maintain correct performance this must be replaced annually or after 500 hours usage, which ever is earliest.
  6. **AIR FILTER.** Located on the bulkhead of the tank case, check that it is operating correctly. It is normally self draining, so the cup should contain no fluid when the unit is switched off. Should automatic self draining not be appropriate then the locking nut on the cup base can be rotated to lock the drain closed. In this case regular draining must be actioned.
  7. The units serial number is located on the bulkhead panel for both halves of the case. Unclip and separate the cases to view.
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## **TWO PART OPERATION**

In quiet ambient conditions or when the size of the *Strata* is too large, the two part case should be split. Undo the two butterfly catches to the left and right sides of the case and carefully separate the two halves. Disconnect the airline hose from the inlet side of the air filter by pushing back the quick release mechanism.

Take the 16 metre extension hose, available as an optional extra, and connect its male end into the air filter quick release socket by pushing in hard until the locking ring clicks. Secure the hose to the hose clip provided at the bottom edge of the bulkhead panel. Position the compressor case where required and connect the female end of the hose extension to the free end of the compressor output hose.

Switch on, having first checked that the tank screw cap is removed, and operate as normal.

If required, multiple extension hoses can be connected to increase the separation distance.

## SAFETY FEATURES

The internal compressor generates substantial heat and it is most important for trouble free operation of both the compressor and the tank that this heat is efficiently removed. Two high capacity fans are incorporated in the compressor case which not only supplies the cooling air for the compressor, but also for the compressed air.

WARNING: Do not obstruct the entry of air to the underside of the compressor case.

WARNING: Do not operate the *Strata* with the screw cap in place, as the build up of internal pressure will blow the rubber safety bung and might also weaken the seal between the tank and its lid.

As a safety feature, the electric motor of the compressor provides its own temperature cut-out. Should this have come into operation the compressor will automatically restart once it is safe to do so. An examination should also be made to determine the cause of the overheating.

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## TECHNICAL DETAILS

SIZE:	535mm x 315mm x 320mm (L x W x H).
WEIGHT:	kg
MAINS:	220-240vAC 50 Hz 300W continuous. <sup>2</sup>
FUSE:	20mm T3.15A 250v AC
OPERATING TEMPERATURE:	0 to + 35degC.
FLUID:	COSHH approved proprietary CIRRUS/CIRRO fluid.

The CIRRO *Strata* CS6 is designed and manufactured in the UK.

We reserve the right to alter specifications without prior notice.

V1.0 /97.

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<sup>2</sup>Consult the factory for 110v and 60Hz versions..