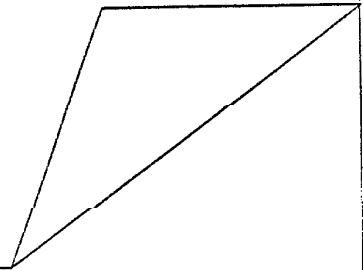


# **THE ROADIE**

**INSTRUCTIONS FOR USE**



## INTRODUCTION

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*The Roadie is a solid state high extremely high power fog generator incorporating the very latest developments and technology. The heart of the Roadie is a pair of laser trimmed platinum film sensors, unique to JEM, which provide precise temperature control. These sensors can detect temperature changes in a fraction of a second, allowing the circuit board to respond immediately to the needs of the machine. The sensors conform to BS1904 Grade 2 Din 43760*

*The Roadie is powered by Four very powerful 2500 Watt high density compacted cartridge heaters and the pumping system is via Four high-pressure oscillating pump developing up to 65 psi. The Roadie is thermally protected by a temperature limiter - in the unlikely event of failure causing the heater to latch on, the limiter will automatically shut the power off to the heater.*

## DUAL HEATER BANKS

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**T**he Roadie is fitted with two heater banks each rated at 5kW. With both banks switched on the Roadie needs a total power supply of 50A at 220/240V, this is reduced to 30A if one bank is switched off.

To reduce the power to 30A use a screwdriver or other similar pointed instrument to operate the 30/50A POWER SELECT switch through the small access hole on the left side of the control panel. Note that this switch is hidden to avoid accidental switching to 50A when connected to an inadequate supply.

## WIRING INSTRUCTIONS FOR TWO PHASE 220/240 VOLT OPERATION

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BLUE WIRE - NEUTRAL  
BLACK WIRE - PHASE 1 (25A)  
BLACK WIRE - PHASE 2 (25A)  
GREEN/YELLOW - EARTH  
BROWN - UNUSED, DO NOT CONNECT

## WIRING INSTRUCTIONS FOR SINGLE PHASE 220/240 VOLT OPERATION

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BLUE WIRE - NEUTRAL  
BOTH BLACK WIRES LINKED - PHASE (50A)  
GREEN/YELLOW - EARTH  
BROWN - UNUSED, DO NOT CONNECT

## WIRING INSTRUCTIONS FOR THREE PHASE (LEG) 110 VOLT OPERATION - N.AMERICA

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BLUE WIRE - PHASE 1 (LEG 1) - 17A  
BLACK WIRE - PHASE 2 (LEG 2) - 17A  
BLACK WIRE - PHASE 3 (LEG 3) - 17A  
GREEN/YELLOW - GROUND  
BROWN - UNUSED, DO NOT CONNECT

## INSTRUCTIONS FOR USE

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**C**onnect the Roadie to the supply as explained above. Be sure that qualified personnel are used to connect the mains and check that the feed can supply sufficient current without overloading. We also recommend that in all cases the feed be from a suitable breaker or isolator for additional safety, in line with modern practice.



***Do not install the Roadie above people's heads.***

The MAINS ON indicator will show that power is available. Ensure that both 10litre tanks have plenty of JEM smoke fluid.

Depress the STANDBY button to turn on the HEATER BANKS (either one or both as selected by the POWER SELECT switch - see above). The machine will now heat up.

When the Roadie reaches its lower operating temperature the green READY light will come on. Note that the Roadie cannot be operated until the READY light has illuminated, this ensures that no liquid or wet smoke can be emitted from the machine.

The Roadie will continue to heat until the temperature reaches its upper limit, the heaters will then cut-out as indicated by the HEATER BANK lights.

## TANK SELECTION

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**E**ither TANK 1, TANK 2 or both may now be selected using the SELECT switches on the right side of the panel. Green indicators will confirm your selection.

## OUTPUT LEVEL

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**T**he Output of the Roadie may be adjusted with the OUTPUT control over a wide range of power. The machine may then be operated manually by pressing the SMOKE button.

## FAN OVERRIDE

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**N**ormally the Fan Speed will follow the OUTPUT control but may be overridden to give you a higher or lower fan speed if required. Press FAN OVERRIDE and you may now directly control the fan with the FAN SPEED control.

## FAN BOOST

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**N**ormally the Fan will only run when the SMOKE button is pressed and smoke is being produced, however the fan may be operated independently of the Smoke output by use of the FAN BOOST button.

## TIMER

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**F**or automatic operation the Roadie is fitted with an easily controllable timer circuit.

The RUN TIME and DELAY TIME may be set independently on the Timer Panel and the cycle previewed on the TIMING CYCLE indicator before engaging the timer with the TIMER ENGAGE switch



***Be careful not to accidentally leave the timer engaged when you turn off the machine - It will start up by itself next time the machine is turned on.***

## FLUID LEVEL SENSING

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**I**f either tank in your Roadie runs out of fluid a sensor will detect it and light the appropriate EMPTY light on the panel. To prevent damage to the pumps do not allow the machine to run with empty tanks.

To protect the Roadie if either EMPTY light comes on the Timer will be disabled. The machine will, however, still operate manually from the SMOKE button to allow for re-priming the system.



***Only use genuine JEM Smoke fluid in the Roadie otherwise the performance of your machine could be seriously impaired. Use of any fluids not manufactured by JEM could be dangerous to your health and could also seriously damage your machine and will invalidate your guarantee/warranty.***



***Be careful not to kink the fluid pipes when changing the fluid tanks.***

## REMOTE CONTROL FACILITY

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The Roadie has two remote control Jack sockets fitted, one on the left end of the controller and the other below the controller on the main chassis.

The socket on the controller is an isolated MONO JACK which takes a 5-24V input of either polarity.

TIP - SIGNAL  
SLEEVE - RETURN

This signal allows remote on/off operation of the SMOKE button.

The socket on the main chassis is a STEREO JACK which may have either a 0-10V variable remote input or a simple potentiometer connected.

TIP - SIGNAL  
RING - +ve SUPPLY OUTPUT  
SLEEVE - EARTH

This input allows operation of the Roadie completely independently of the normal control panel, in fact the normal panel may be totally removed if required. Plugging a jack into this socket will automatically cause the machine to heat-up and the variable input will directly control the Smoke Output of the Roadie.



***Always ensure that there is plenty of JEM Fog Fluid in the machine. Do not allow foreign bodies to contaminate the fluid and never dilute the fluid with tap water.***

## PLATINUM FILM SENSOR

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The platinum film sensor is extremely fragile and so great care must be taken when replacing this piece of equipment. It is located under an aluminium plate on the top of the heater block. There is a 20 micron film of glass covering the platinum in the sensor. Be very careful not to scratch the glass and also make sure the small strip of mica is fitted over the glass screen. This protects the glass from being scratched by the aluminium protective plate. Once replaced and before re-connecting the wires, use a suitable test meter and check for a resistance of 100 ohms across the wires, with the aluminium block at room temperature. Also check to see that there is no reading between either sensor wire and the chassis. A reading between wire and chassis is a fault condition and indicates an insulation breakdown or possibly a broken sensor.

### **DMX512 OPTION**

If the Roadie is fitted with the optional DMX512 input you may control the Roadie from the DMX512 standard 5 pin XLR connector on the side of the rear panel.

The DMX address is set in binary on the dip switches on the DMX board which is fitted inside the black plastic box on the left hand side of the machine.

The switch encoding is as follows:-

<b>dip switch</b>	<b>Value</b>
1	1
2	2
3	4
4	8
5	16
6	32
7	64

The address may be set to address 1,5,9,13 etc in multiples of 4.

If the dip switch is set to 'N' then the DMX address will be  $(4 * N) + 1$ .

That is:-

<b>dip Switch</b>	<b>DMX Address</b>
0	1
1	5
2	9
3	13
.	.
.	.
125	501
126	505
127	509