

THE RAIN REPORT BY DTFX

Backlight, Background & Coverage

Rain





Rain

effect Sydney
The DTFX oscillating rain head system in action

Rain is a useful tool in the filmmaker's kit. With a little planning you can get a fantastic result for a modest outlay. This report outlines the things you need to have a great rain shoot. Topics covered include:

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Generally a rain system will need to be tailored to your shoot, so feel free to call us with any questions you might have.

Wide Shots

Lighting Backlight, Dark Backgrounds & Coverage

Like most things filmic, lighting is crucial to capture a good rain effect.

Rain is best shot in two ways –

1. Falling Rain – backlit against a dark background works best.

2. Rain on Hard Surfaces – If for some reason you can't backlight (e.g. sun in the wrong place, no room for a light) then the next best thing is to see the rain hitting hard surfaces. This means you see the rain bouncing off roads, umbrellas, and car roofs etc.

For this to be successful you must have full coverage over the area you're seeing.

You must backlight falling rain. Front lit or side lit rain doesn't read well on film. (sometimes you can't even see front lit rain with the naked eye)

The Best Rain you can get

The best result you could hope for is to have backlit rain at night falling full coverage on hard surfaces. This looks amazing!

How to Cheat Rain

Narrow Patterns in front of camera

If you are not seeing the ground or any hard surfaces, you may only need a narrow pattern falling in front of camera and onto actors (if any) to give the impression of rain. This can be especially useful if you have location issues such as power lines or budget issues. It is quite common to do this if you're shooting through a window and not seeing hard surfaces.

Storms

For a great storm effect, just add wind (and maybe a little smoke) (and perhaps some leaves and/or tree branches or a car or two flying through shot...)



rain

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Storm for Allianz insurance- wind, rain and flying debris

Types of Rain Systems

Rain Heads and Nozzles:

There are a wide range of specialty rain heads and nozzles available, each of which does a different job. There's broad, flat pattern nozzles, circular nozzles, square pattern nozzles, pin point nozzles, even nozzles that create a hole in the middle to keep cast dry – there are thousand of types available, but we probably have all the ones that work for film.

Rain Stands

These are 6 metre high stands with one or more of our specialist rain heads attached. Typically the heads will throw a broad but not very deep pattern. Rain stands are very useful for pathways, for under trees, and locations where a crane or boom lift can't be used, such as in a park or where there are overhead obstructions like awnings or power lines. They can also provide useful infill or over-camera coverage.

Straddle Bars

This is a “goal post” arrangement over the top of shot, using a variety of rain heads to achieve the best look. The stands can be cheated right to the edge of shot, so they can reach quite deep into the background if using longer lenses.

Overhead Rain – Cranes and Boom Lifts

A crane or boom lift allows you to get a rain head over a wider shot. In general terms, to successfully use overhead rain you need to position the crane where it can get the rain head centred in shot. You get a larger coverage area with less effort and less reset time by using an overhead rain system.



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Boom lift rain – 20 x 15 metre full pattern coverage

rain

The Oscillating Rain Head System

There are a number of types of crane-flown overhead rain heads available, but the by far the best we've seen is the new Oscillating Rain Head.

The old style spinning head which many companies still use is actually a fire-fighting tool called a cellar nozzle. It is designed to dump a lot of water very quickly into a burning warehouse. It leaves a big rain-free hole in the middle of shot – which is usually where the focus of the shot is.

The Oscillating Head was originally used for dust suppression in mining where full pattern coverage and low water consumption are important issues. It gives even coverage over the area at low water usage rates.

The Oscillating Head uses about 1/7th the water of a spinning head and gives wider coverage. (54 l/min v 353 l/min & 15 sqm v 10 sqm {40mm})

Lower water usage is good for the environment and requires less pumping power, which reduces costs.

The DTFX Rain Head rig, in standard format, provides coverage starting at 20 x 15 metres from a Cherry Picker or Crane, or larger custom sizes and shapes using lighting truss hanging from a crane. The system can be expanded to cover any size you need, location and budget permitting. We can also create shapes that will provide rain in T intersections and crossroads for instance.



Crane rain on location – Home and Away

Location Recces

A location recce is vital to work out the best way to get the shots you need.

A recce allows us to plan:

the area that needs covering for each shot that makes up the sequence
whether a crane flown, straddle bar, rain stands or combination system is best

what hazards like power lines need avoiding

where to park the crane and tanker

where the water is coming from and whether we need a back up tanker

what the drainage is like

whether we need to protect the location from foot traffic or vehicle damage

how much background needs to be wetdown

which pumping options we employ

From this information we can accurately price your job. If money becomes an issue, we can help you work out how to shoot the scene to make the rain price fit the budget.

Interior Rain

It is perfectly possible to have it raining indoors, or to achieve a fire sprinkler, broken pipe or other water effect.



Interior rain for Opera Australia

Sometimes it is as simple as a “rain outside a window” effect, which can be easily achieved, sometimes a little more depth is required, sometimes you might need the whole studio deluged.

With a little planning it is possible to have the convenience and efficiency of a studio shoot and rain as well. Call us to discuss.

God

As with many Special Effects, God wins most arguments. Things that can upset the best-planned rain job include wind, or the sun coming from an unfriendly direction.

Oddly, real rain is generally not helpful because it’s rarely consistent over a shoot day or days. Sometimes real rain is hard to match, so it’s best to run the rain machine even if the real stuff is coming down.

Background Wetdown

A background wetdown is usually required to make roads, paths, trees and cars etc look like they are being rained on when in fact they aren’t.

DTFX carry a full range of wetdown hoses in both 20mm (fire hose) and 40mm (fire fighter) which reach over 100 metres from the tanker. We can also arrange to get an additional wetdown tanker to give coverage over bigger areas.

Production Issues

Rain presents particular challenges for the Production Department, but a little planning will ensure a smooth shoot.



Rain stands – Justice Crew music video

Cast

Where cast will be working in rain, you need to make provision for their wellbeing. This is particularly important in winter when hypothermia becomes a real danger.

The best first option is to keep cast dry on the inside.

- If they are wearing wet weather gear as part of their wardrobe, then most of the work is done.
- If the cast can't wear wet weather gear for any reason such as script requirements, then you can still help keep their skin dry and reduce the health risks.
- A lightweight plastic poncho or raincoat worn under a bulkier costume could work well. The Wardrobe department might be able to re-cut plasticwear to suit the costume, or even sew a plastic layer to the inside of a costume if they are making it from scratch.

- If cast are wearing lightweight summer clothes, a wetsuit might be worn under the costume, or a waterproof under-layer which can reduce water contact with the skin.
- In winter a wetsuit under the costume will also help keep cast warm.
- Light coloured clothes often go transparent when wet, so a flesh coloured wetsuit is a good option.
- if the actor starts a shot with dry clothes, then you need sufficient costume changes to allow each set to dry between takes (and you'll need a dryer!)
- You need sufficient towels to dry the cast off (these will need drying too)
- A Hot Room will help to bring cast's ambient temperature back to normal (this can be as simple as a pop-up canopy with full side flaps and a heater inside)
- A hot shower is a useful way of restoring body heat.
- A nurse or medical officer to monitor cast wellbeing should be part of your plan.

Hot Rain

DTFX can provide heated water to reduce the chilling effect of cold rain. This requires careful planning of water consumption and would typically need additional tankers and pool heaters, and sufficient time to heat the water. Please call to discuss.

Crew

Crew should bring full wet weather gear including gumboots. Camera crew in particular often get soaked. A scarf or tea towel around the neck will help stop water getting inside the wet weather gear. A change of clothes may also be a good idea.

Film Gear

The DOP will need to place some lights in or near the rain. Hog wire does a good job of protecting lights. The Gaffer will also take the normal precautions with power and cabling such as plastic wrapping the cable joins and keeping cables out of gutters and water courses. Other gear such as dolly and tracks, set dressing and vehicles that might need to be in the rain may also need to be protected from water. Crew should bring sufficient towels or cloth to dry the set dressing or gear between takes if required.



Rain stands for Eternity Man

Camera

As well as plastic rain covers for the camera and lenses, you may wish to consider a rain deflector to keep the lens clear if the camera will be in the rain.

Location

You should consider the effect of rain on your location.

Is there sufficient drainage?

Will pools and puddles develop?

Will the ground get soaked and bog vehicles like the crane, tanker, grip and lighting trucks?

Will the garden get soaked and damaged from lighting stands and dolly tracks and crew walking through?

Can you lay boards to lessen damage, or keep crew out of certain areas?

Can you safely lay plastic down to keep areas dry?

The location recce will help answer these questions.

DTFX Rain Machines

DTFX offers the following configurations of rain gear. Custom water and rain effects can be developed or larger areas accommodated.

We bring all our standard gear to every job, so if things change on shoot day, we can usually cover the changes.



Rain stands for Canon Cameras Korea – 10 x 10 metre coverage

Rain Stands

Up to 6 rain stands. Useful amongst trees or where a crane or boom lift can't go.

Straddle bars

A goal post 6 metres across which allows over camera coverage. This is often used in conjunction with rain stands.

Boom Lift Rain

Gives 20 x 15metre full pattern coverage. Suitable for level locations. This is the most economical overhead system.

Crane Rain

Our unique crane-flown Oscillating Rain Head System gives standard coverage starting at 20 x 15 metres, and can be expanded to suit your needs. Good for general use and for off road and sloping location.



Crane Rain in a forest – 50 x 15 metre coverage

Tracking Rain

It is possible to track rain with vehicles with appropriate planning.

Car Roof Top Rain Rig

Gives effective rain on a moving vehicle from a roof mounted rig. Suitable for interior shots.

DTFX Tanker

DTFX operates a 2000 litre tanker mounted on an Isuzu NPR300. It's small, easily manoeuvrable and doesn't attract unwanted attention in a water conscious world.

The tanker takes up 7 metres of roadway and needs to be parked near the crane.

At lowest output (one Oscillating Head) the tanker will run for up to 40 minutes before refill.



DTFX rain tanker and standard gear

Tanker Refill

Most metro streets have hydrant points every 50 metres. If we have a hydrant on the same side as the location we can often just plug in and refill as we go.

If there's no hydrant point close by, we need either to go to it, or to have a feeder tanker bring the water to the pump tanker. The tanker refills in around 7 minutes – plus travel time to the nearest hydrant point if required. In rural places or where there is no convenient hydrant point, a feeder tanker often makes sense.

Pumps

We operate petrol and electric pumps.

The petrol pump is not recommended for use in suburban streets or shooting sound.

The electric pump requires a 3-phase 32amp input. (4kva, 5 pin Wilco, soft start) We usually plug into the Gaffer's generator. We can arrange for stand-alone power if required.

Licences

Of course we have all the current licences and authorities required to make great rain.

Prices

Every job is different and the recce is the only way to work out what's best for your job, and what it will cost.

In simple terms, the wider the shot the more it'll cost. Tighter shots will require less coverage, so less gear, people and money

There are price guidelines to assist with pre-recce budgeting, so call for more info. DTFX includes the cost of a half-day recce in all rain prices.



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By David Trethewey

Special Effects Supervisor based in Sydney Australia, providing SFX services to the Film, TV, Entertainment & Events sectors. We design, build and operate all physical and mechanical in-camera special effects.