

## LIGHTING TECHNICIAN

### Kaihanganrau Rama

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### Description

Lighting technicians set up and operate lamps and other lighting equipment to provide light and special lighting effects in theatres, at events, and for film and television productions.



Chris McKenzie checking a light

### He Whakamarama



Mahi ai ki te whakatu rama me te whakamahi i etahi atu utauta hei whakamarama, a, hei tuku maramatanga whakahirahira ki nga whare tapere, ki nga whakahaere me nga mahi e pa ana ki nga take whitiahua, pouaka whakaata ranei.

### Alternative Titles

- Lighting Operator
- Lighting Designer
- Theatre Lighting Technician
- Technician (Lighting)
- Gaffer

### Tasks and Duties

Lighting technicians:

- study the script and consult with the director to assess what is required

- may discuss production requirements with the camera operator
- select lights and equipment to be used and organise any additional equipment
- set up the lights and equipment
- choose and combine colours to achieve the desired effect
- operate the lights during the performance
- light each scene in television and film
- may maintain and repair the equipment
- may set up the frames and scaffolding for the lighting rig
- may also operate the sound system
- explore new techniques and special effects.



Lighting technician setting up a light

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## Personal Requirements

### **Skills**

Lighting technicians need to have good technical skills and creative ability in order to operate a lighting rig (the lighting system). They should also have good organisational ability and planning skills. Communication skills are important as lighting technicians need to be able to relate to the director, performers and the production crew.



Chris McKenzie choosing a light

## **Knowledge**

Lighting technicians should know about lighting and set design, special lighting effects, the qualities of light and colour, and how to operate a lighting rig. They also need to understand the filming process, particularly different camera techniques. An understanding of safety procedures is important. It is useful for lighting technicians to have electrical knowledge.



***"It's important to be aware of the safety issues, because you're dealing with a lot of power and we do some silly things like shoot in the rain. You always have to think about other people when you're laying cabling and make sure you put ramps down."***

**Chris McKenzie, Lighting Technician**

## **Personal Qualities**

Lighting technicians need to be practical, punctual and able to work well under pressure. They should also be creative and accurate, and they should have a good sense of colour.

## **Physical Requirements**

Lighting technicians need to be reasonably fit with good mental and physical stamina, as they often work long hours with few breaks. They should also have good hearing and normal colour vision, and be unafraid of heights, as they have to climb up rigging.



***"You need to have stamina in this job, because you can sometimes work up to 15 hours a day for five days in a row, with few breaks."***

**Simon Rayner, Lighting Technician**

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## **How to Enter the Job**

## Secondary Education

There are no specific educational requirements for lighting technicians. A tertiary entrance qualification in some of the following subjects may be useful: English, maths, physics, computer studies, design and technology.

## Tertiary Education

A course in television, video or film may be useful for lighting technicians.

### **Related courses:**



[Light and Illumination Engineering](#)  
[Media Production](#)  
[Video and Television](#)  
[Acting, Drama and Theatre](#)

### **Take off to tertiary!**

[Take off to tertiary!](#) - information and advice to help with study or training decision-making.

### **New Zealand Qualifications Authority:**



[Electronic Media](#)  
[Film and Television](#)  
[Performance Production](#)

## Entry Requirements

There are no specific entry requirements to become a lighting technician, although some may need to have a Class 2 driver's licence.

Further information on driver licensing is available from the [Land Transport Safety Authority](#), which also provide a list of [Approved Courses For Occupational Drivers](#).

## Useful Experience

Useful experience for lighting technicians includes:

- working backstage in theatres
- electrical work
- computer work
- photography
- work in the entertainment industry
- production work in television or film.



***"Experience working with computers is useful, because lighting control systems are getting more advanced and computerised."***

**Simon Rayner, Lighting Technician**

## ***Training on the Job***

Skills are gained on the job. Lighting technicians may attend training courses.

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## ***Working Conditions***

### ***Work Places and Travel***

Lighting technicians work in theatres, on television and film sets, and at a variety of venues for corporate functions, outdoor events and concerts. They may travel a lot between venues depending on the type of work they do.



A lighting control desk

## ***Equipment***

Equipment lighting technicians use includes:

- lights such as spotlights and floodlights
- gels (coloured filters)
- lighting control desks
- rigging, cabling and generators
- ladders
- hand and power tools
- safety equipment and protective clothing.



Lighting rigs are often suspended from the ceiling

## Workplace Conditions

Lighting technicians work high above the ground and in confined spaces such as lighting booths. They work outdoors in all weather conditions, and indoors in conditions that may be dark and dusty.



***"The best description of the film and television industry is 90% hanging about and 10% feverish activity."***

**Chris McKenzie, Lighting Technician**

## Employment Conditions

### Hours

Lighting technicians work long and irregular hours. They also work evenings and weekends. Many are self-employed freelancers who are employed casually.

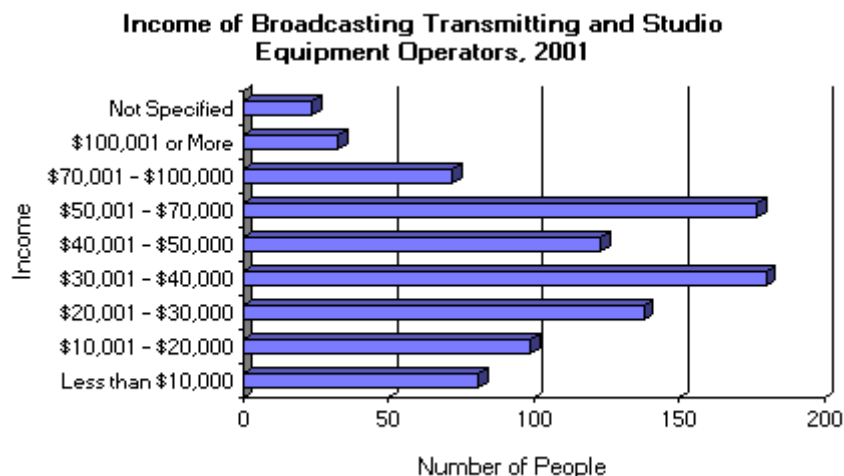


***"You need to be able to work under pressure because of the restricted time frames and budgets you may be expected to work under."***

**Simon Rayner, Lighting Technician**

### Salary

Salary varies, but most lighting technicians earn between \$30,000 and \$60,000 per year, depending on experience. Many are self-employed freelancers, who usually earn between \$200 and \$600 per day.



Source: Statistics New Zealand

[Interpreting Charts](#)

## Contact with People

Lighting technicians work in production teams. They may work under the direction of an artistic director, a director, a production manager or lighting designer, and they interact with a wide variety of people (especially camera operators if they work in television or film).

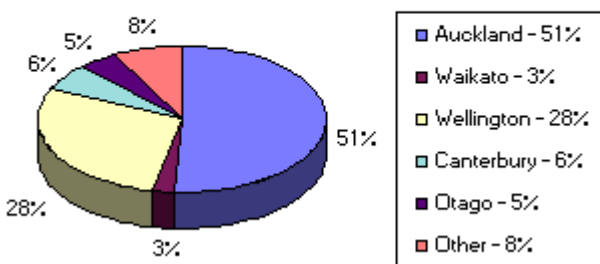
## Job Market

### Market Details

These statements and statistics are based on information available from Statistics New Zealand about broadcasting, transmitting, and studio equipment operators. Charts and statistics on broadcasting, transmitting, and studio equipment operators include data on film/video editors and lighting technicians.

- 927 people were employed as broadcasting, transmitting, and studio equipment operators in 2001
- 89% were employed full-time
- 26% were female
- The highest proportion of people were employed in the Auckland (51%), Wellington (28%) and Canterbury (6%) regions.

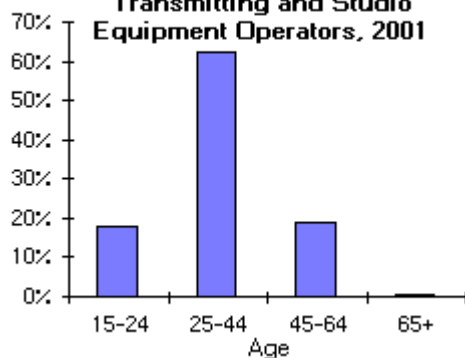
**Regional Location of Broadcasting Transmitting and Studio Equipment Operators, 2001**



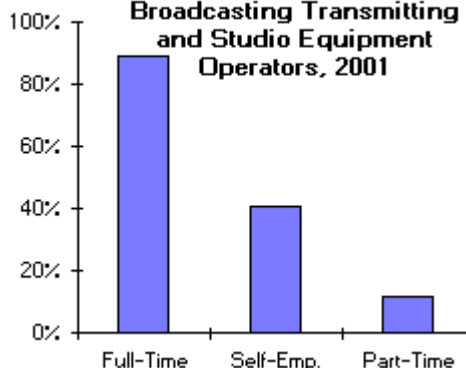
**Gender of Broadcasting Transmitting and Studio Equipment Operators, 2001**



**Age of Broadcasting Transmitting and Studio Equipment Operators, 2001**



**Type of Employment of Broadcasting Transmitting and Studio Equipment Operators, 2001**



Source: Statistics New Zealand

[Interpreting Charts](#)

## **Job Outlook**

The outlook for lighting technicians is good because of the number of overseas productions being made in New Zealand at the moment. Lighting technicians are reliant on the number of productions for employment opportunities because they are usually self-employed freelancers. It is difficult to predict whether the current level of production will be sustained, although New Zealand is being actively promoted as a filming destination overseas. Government support for the local industry also affects employment opportunities, and the possibility of a local quota on television would also have an affect.

The rise in international production work has affected the occupation in several ways. The increase in demand for lighting technicians has resulted in people being promoted before they have accumulated the relevant skills and experience. It also means that well trained technicians are highly sought after. This situation is unlikely to change, as there is no training infrastructure established within the industry and education providers only teach the basic skills. Overseas production has also brought New Zealand in line with international trends and practices, which means lighting technicians have had to develop business skills and become more aware of health and safety issues.

Improvements to technology require lighting technicians to have more skills to operate the new equipment. Special effects mean they need to have a better understanding of the post-production process.

The healthy state of the industry means turnover is relatively low; however, because lighting technicians usually work on short-term contracts, it means the job is insecure and this may result in some people looking for more permanent work.

(Updated 12/02/2003)



***"The industry is generally buoyant at present due to a continuing amount of overseas production shooting in New Zealand. This is creating demand for people and is causing people to be promoted rapidly through the ranks."***

**Chris McKenzie, Lighting Technician**

## **Regional Market Details**

Northland / [Auckland](#) / Waikato / Bay of Plenty / Gisborne / Hawke's Bay / Taranaki / Manawatu-Wanganui / [Wellington](#) / Tasman / Nelson / Marlborough / West Coast / [Canterbury](#) / Otago / Southland

### **Auckland:**

The number of broadcasting, transmitting and studio equipment controllers employed in the Auckland region is expected to grow moderately over the next three to five years. Employment opportunities are growing due to more radio and television broadcasting channels becoming available and a current shortage of skilled technicians. As a result of this shortage, some larger companies are considering recruiting technical staff from overseas.

Turnover among broadcasting, transmitting and studio equipment controllers is low to moderate. Many are employed full-time and change positions between broadcasting stations rather than move out of the industry. Due to the current skill shortage, competition between businesses is high and people with



experience and knowledge are being actively sought which may affect turnover levels.

(Written 20/12/2002)

### Wellington:

The number of film/video editors employed in the Wellington region is expected to remain stable over the next three to five years. Employment opportunities are influenced by large film projects in the region, such as Lord of the Rings, and government funding for film or television productions. While many government ministries based in the region commission programmes, job numbers are also being effected by other private and public sector companies moving their head offices away from the region. Currently there is a shortage of on-line editors, and computer skills are considered vital. However, the number of training courses being offered to people wanting to be film and television editors may decrease this shortage.

Turnover among film/television editors in the region is low as they are generally satisfied with their employment conditions. Film/television editors in the region may be employed full or part-time and some work on contract.

### Canterbury:

The number of lighting technicians employed in the Canterbury region is expected to remain static over the next three to five years. Employment opportunities are influenced by the number of entertainment venues in the region. Currently the market is competitive as no new entertainment venues are likely to open and the television networks are not producing any major productions. Job numbers may increase in the entertainment industry as local lighting technicians are often hired for touring events although some lighting technicians travel with the event.

Turnover among lighting technicians in the region is low and this trend looks likely to continue over the next three to five years. Generally they are satisfied with their work and employment conditions, however turnover can be variable as many lighting technicians are self-employed or work on contract.

Lighting technicians in the region may be employed part-time, full-time or on contract. However, they are generally employed full-time and work on contract for special events.

## Current Vacancies



[Physical Science and Engineering Associated Professionals](#)



[KiwiCareers Job Vacancy Links](#)

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## Personal Profile

### Simon Rayner



I started off doing lighting work on an amateur level and wrote to a couple of

theatres to find out what job opportunities there were. One of them wrote back and told me about a lighting course, so I applied for it and got accepted. After I finished the course, I happened to walk into a theatre that was being renovated. I asked if they had a lighting technician job available, and they had. It was voluntary work, but I had my foot in the door, and I've been doing it ever since.

When I finished working there I went on tour with a show doing the lighting, and then I got a job for a company that hired lights and lighting systems. I had a few other jobs and then I wound up working for this theatre full-time. I like this job because I love theatre and it's good to be able to stand at the back in your lighting booth and know that you've made an impact on what the audience has seen.

If you are interested in this job, I'd say be persistent and make sure that people in the industry know you are around. When there is work available, it's usually given to those who are fresh in their mind, or who they have worked with most recently.

## ***Chris McKenzie***

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I've always been interested in music and theatre, and playing around with electrical and mechanical things. At school I got involved with the drama club and started doing lighting, then I worked on productions for the local dramatic society. I'd decided by the time I was 16 that this was what I wanted to do, but there was still a push to get a qualification. My intention was to go to university and swan off into the theatre business once I had a degree behind me. In my first year I did five shows for the drama society and decided to leave university and do a NZ Certificate of Engineering, which I needed a job for because it was mainly on-the-job training. I'd met a guy who was working

in television and he was able to find me a job at the NZ Broadcasting Corporation. I slotted in as a technical operator trainee in the lighting department. I spent about two and a half years working there, and received a lot of good practical training. Then I took a job as a lighting assistant in Sydney. Two weeks after I arrived there was a huge upheaval and I was soon in charge of lighting a live TV show. Luckily I had the discipline to work in a live environment because of my theatrical experience. I still love doing live shows, even though I've specialised in television and film.

When I work on a TV drama or film, the first thing I do is go through the script and note down things like time of day, mood and any special light effects for each scene. It is my job to create the conditions that the script specifies. So we may be filming inside a room on an overcast day, but the script says it's a sunny day, so I'd set up lights outside the window to throw shafts of light into the room, like the sun would. Lighting can also be used to alter a person's appearance; for example, it can make an actor look more attractive or more threatening. It's important to remember that most of the time we're controlling the light rather than actually lighting things. It's taking light away or putting it in the right place; half of lighting is darkness.

These days I just do bits and pieces. The last serious thing I did was light the interior of a church for a Mass on New Year's Day for TVNZ. A Mass is a very theatrical production; from a lighting perspective it's an illumination job but you can put little touches in to make it a little more theatrical. The next major job I'm doing is a fashion and music show. It's live with TV coverage and my involvement is because it's TV, but I have to light it for the live audience as well, and keep it working in a style that's acceptable to television.

## ***Further Information***

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### ***Relevant Contacts***

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- Theatres
- [ITVA NZ](#)
- [NZ Association for Theatre Craft, Design and Technology](#)
- [NZ Film and Video Technicians' Guild](#)

## **Related Jobs**

- [Cinema Projectionist](#)
- [Director \(Film/Television/Video\)](#)
- [Film/Television Camera Operator](#)
- [Film/Video Editor](#)
- [Photographer](#)
- [Producer \(Film/Television/Video\)](#)
- [Production Assistant \(Film/Television/Video\)](#)
- [Production Manager \(Film/Television\)](#)
- [Production Runner \(Film/Television/Video\)](#)
- [Radio/Television Sound Operator](#)
- [Theatre Producer](#)

## **Industry Overviews**

- [Motion Picture, Radio and Television Services](#)



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