

## ***"Infrared Jump Start Workshop"***

Most people would not consider buying a car without test driving it, let alone knowing how to drive one in the first place. Surprisingly, many people buy an infrared camera with little more than a sales demonstration, and with the false assumption that a camera is simply point and shoot. With limited knowledge of the camera operation, and even less understanding of the camera's actual measurement capability it is a daunting task to be sent out in the field to collect meaningful data and present this information to clients or superiors.

*The Infrared Training Workshop is a first step for people just starting out.* It is aimed at in-experienced or first time users who want to gain practical experience and insight into the operation of infrared cameras and to **start them on the "right path"** for practical use of their instrument in the field.

### 1 or 2 day Workshops

The 1 or 2 day workshops can be taken consecutively or independent of one another. The 2 day course is regularly held in Melbourne, at Industrial Precision Instruments Pty Ltd Head office in Mitcham, approx 20km East of Melbourne (30 minutes drive from the CBD). Our fully equipped laboratory and training room provide participants with a comprehensive array of learning tools. In addition infrared cameras are provided to participants for the duration of the course.

Workshops are also held Australia wide at nominated venues. For a complete listing of course dates please refer to our website: <http://ipi-infrared.com.au/infrared-training/course-dates>

### On-Site Courses

Alternatively, we can hold the course on-site at your premises. For on-site courses the minimum charge is for 6 people.

All course materials and equipment will be provided, however the host is required to provide appropriate training facilities and refreshments for participants. Travel charges, accommodation and meals charges also apply. These will be quoted upon request.

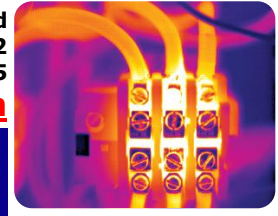
### Curriculum

The "Infrared Workshop" is a non-accredited workshop and is solely designed to give participants a practical understanding to begin their in-field use. It is an ideal lead-in course to the Level 1 Certified Infrared Thermographer Course, giving participants a foundation in:

- **Why we use infrared: Common Applications**
- **Understanding the nature of Infrared Radiation**
- **How an infrared camera works**
- **How to operate an infrared camera: focus, range & palette selection, sensitivity optimization.**
- **Understanding the capabilities and limitations of an infrared camera**
- **Basic Introduction to Infrared Theory and how it relates to practical use**
- **Awareness of errors such as emissivity, reflectance, emittance, distance, and target size**
- **How to capture quality images**
- **Overview of software and analysis features**
- **Overview of industry standards for reporting requirements**

### Course Objective

Upon completion, participants will understand how to use an infrared camera within the scope of it's capabilities, understanding it's limitations, and applying basic theory in a practical manner to avoid common errors.



## The Experts in Thermography

International Partners of the Infrasppection Institute

### Class Times

The courses begin daily at 9am and finish at 5 pm. 1 hour is allow for lunch, and 10 minute breaks are taken each hour to keep participants refreshed.

Please note that for on-site classes a total of 6 hours of class participation is required each day but can be flexibly adapted to your work environment.

### Itinerary

#### Day 1 (fundamental principles)

##### 9am start (10 minute break each hour)

- Class introductions, round table discussion of group needs and requirements.
- Introduction to imaging applications, with the focus on electrical mechanical and introduction to the fundamentals of both qualitative and quantitative analysis.
- Learning the importance and effect of distance to spot measurement capability (hands on tutorials)
- Learning the importance of emissivity. Avoiding errors, basic introduction to measurement. (hands on tutorials)

##### 12 – 1pm Lunch

- Learning the importance of reflectance and transmittance. (hand on tutorials)
- Optimising Imager sensitivity and use of effective colour palettes. (hands on tutorial)
- Advanced Camera operation (hands on tutorial)

##### 5pm finish

#### Day 2 (Application analysis and reporting)

##### 9am start (10 minute break each hour)

- Revisit Emittance, Reflectance and Transmittance in more detail.
- Optional: field measurement practice  
Or
- Presentation on 7 detectable electrical faults (introduction to Level 1).
- Reporting and analysis

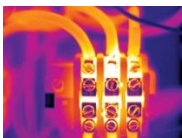
##### 12-1pm Lunch

- Introduction to the Standard for Infrared Inspection of Electrical Systems and rotating equipment.
- Explore qualitative and quantitative analysis as per industry standards

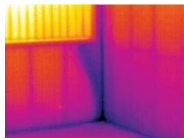
##### 5pm finish

### Professional, Real World Experienced Training

All of our instructors are highly experienced, practicing thermographers. Each brings years of unmatched, real-world experience to the classroom. Our courses are taught using a combination of dynamic multi-media presentations, hands-on demonstrations and one-on-one interaction with students. Our courses integrate theory, practice, and case studies in a fun, relaxed atmosphere designed to maximize your learning experience. Our experienced staff have many years of in-field experience and are able to assist in the following areas:



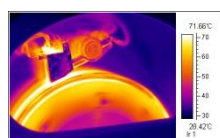
Electrical



Building  
& Pest



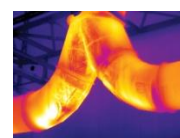
Energy Loss  
& Distribution



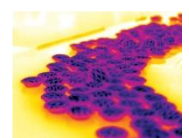
Mechanical  
and refractory



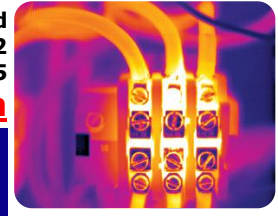
Transmission  
Control



Pipe Work



Manufacture



**The Experts in Thermography**  
*International Partners of the Infrasppection Institute*

### Enrolment Fees

Single day courses cost \$600 ex GST per person, per person day. All inclusive for the 2 days covering course notes and materials, morning tea, lunch and afternoon tea. (Does not include travel, accommodation and any other personal expenses.)

### Optional Airborne Ultrasound Component

Airborne Ultrasound is an excellent complimentary technology to Thermal Imaging. Used side by side, these technologies can be very effective NDT tools. As an alternative to the above mentioned program we can conduct 1 day of the thermal imaging workshop and include a 1 day component in Airborne Ultrasound which will cover elements of the following:

- Effectiveness of Airborne Ultrasound
- Applications: pressure/vacuum leaks, bearing monitoring, steam traps, valves, compressors, heat exchangers, gear / gear boxes, pumps, motors, electrical switchgear (arc, corona, tracking).
- Fundamentals in Sound Theory
- Equipment operation and use
  - Selecting the appropriate measurement module, microphone or contact probe,
  - Sensitivity adjustment,
  - Frequency tuning
- Software and Analysis

As a 2 day course this will mean that some components of the Infrared curriculum will not be covered. **Alternatively a 3 day course can be held for an additional \$600 (ex GST) per person. This covers the full 2 days of course material on thermal imaging as well as the 1 day ultrasound component.**

### **REGISTRATION & DATES**

To register or for further inquiries, please contact [brenton.ward@ipi-inst.com.au](mailto:brenton.ward@ipi-inst.com.au) or Phone IPI on 03 9872 5055 to request a registration form. Courses are held each month and dates are listed on the registration form and website.

[www.ipi-infrared.com.au](http://www.ipi-infrared.com.au)