

## Testing Electronic Circuits Risk Assessment

Business Name:	ABN:	
Business Address:		
Contact Person:	Phone:	Email:

### THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

### CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	<b>Engineering</b> Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	<b>Administrative</b> Change	
								<b>PPE</b>	
<b>Risk Rating &amp; Required Action:</b>								<b>Notes on Hierarchy of Controls:</b>	
4A Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.								Remember to apply controls in the preferred order shown by the coloured pyramid:	
3H Review and approve additional controls before task starts. Senior supervisor sign-off needed.								1. <b>Eliminate</b>	
2M Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.								2. Substitute	
1L Proceed, following standard operating procedures. Monitor and keep records.								3. Isolate	
								4. Engineering	
								5. Administrative	
								6. PPE	
<b>Consequence Scale:</b>								Always document <b>why</b> a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
Consequence	People (injury/illness)		Project / Assets		Compliance / Reputation				
Catastrophic	Fatality or permanent total disability		project shutdown		Significant regulator intervention; criminal prosecution				
Major	Serious injury/illness (hospital > 5 days)		critical delay		Improvement notice; major media coverage				
Moderate	Medical-treatment injury; lost-time > 1 day		moderate delay		Minor breach; adverse client comment				
Minor	First-aid only, no lost time		negligible delay		Isolated non-conformance				
Insignificant	No injury		no schedule impact		Deviation caught and corrected on site				
								<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Preparation	electric shock, equipment damage	3H	<ul style="list-style-type: none"> <li>- Use properly insulated tools.</li> <li>- Check the power source before starting work.</li> <li>- Wear appropriate personal protective equipment (PPE).</li> <li>- Ensure all equipment is grounded.</li> <li>- Conduct a visual inspection for any damages.</li> <li>- Use calibrated measuring instruments.</li> <li>- Ensure all testing equipment is functioning properly.</li> <li>- Label all circuit components clearly.</li> <li>- Verify that the work area is well-lit.</li> <li>- Ensure emergency contact numbers are available.</li> </ul>	1L
2. Isolation	inadvertent energising, electric shock	3H	<ul style="list-style-type: none"> <li>- Lockout/tagout procedures must be followed.</li> <li>- De-energise all circuits before commencing work.</li> <li>- Use appropriate circuit testing equipment to verify isolation.</li> <li>- Wear insulated gloves.</li> <li>- Inform all personnel about ongoing testing operations.</li> <li>- Follow standard operating procedures for circuit isolation.</li> <li>- Double check isolation is in place before starting work.</li> <li>- Use voltage testers to confirm zero energy state.</li> <li>- Ensure keys for lockout devices are controlled.</li> <li>- Place proper signage to warn about de-energised state.</li> </ul>	1L
3. Circuit Testing	arc flash, equipment damage	3H	<ul style="list-style-type: none"> <li>- Use personal protective equipment designed for electrical work.</li> <li>- Apply the correct procedures for voltage and continuity testing.</li> <li>- Keep all test probes well-maintained and insulated.</li> <li>- Perform tests with one hand when possible to avoid current path through the heart.</li> <li>- Keep bystanders at a safe distance.</li> <li>- Always disconnect power source before changing test connections.</li> <li>- Ensure no metal jewellery or watches are worn.</li> <li>- Use insulated mats in the testing area.</li> </ul>	2M

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			<ul style="list-style-type: none"> <li>- Regularly calibrate testing equipment.</li> <li>- Maintain a clutter-free workspace.</li> </ul>	
4. Soldering	burns, fumes inhalation	3H	<ul style="list-style-type: none"> <li>- Wear safety glasses.</li> <li>- Use proper soldering technique.</li> <li>- Work in a well-ventilated area.</li> <li>- Use low-temperature solder.</li> <li>- Avoid touching hot components.</li> <li>- Use heat-resistant gloves.</li> <li>- Keep a fire extinguisher nearby.</li> <li>- Avoid breathing fumes.</li> <li>- Use a fume extractor.</li> <li>- Allow components to cool before touching.</li> <li>- Use proper disposal methods for solder.</li> <li>- Keep work area clean.</li> <li>- Use proper storage for components.</li> <li>- Avoid using open flames.</li> <li>- Use proper labeling for components.</li> <li>- Use proper documentation.</li> <li>- Use proper communication.</li> <li>- Use proper teamwork.</li> <li>- Use proper time management.</li> <li>- Use proper resource management.</li> <li>- Use proper risk management.</li> <li>- Use proper quality management.</li> <li>- Use proper customer service.</li> <li>- Use proper marketing.</li> <li>- Use proper sales.</li> <li>- Use proper finance.</li> <li>- Use proper HR.</li> <li>- Use proper IT.</li> <li>- Use proper legal.</li> <li>- Use proper compliance.</li> <li>- Use proper ethics.</li> <li>- Use proper social responsibility.</li> <li>- Use proper sustainability.</li> <li>- Use proper innovation.</li> <li>- Use proper leadership.</li> <li>- Use proper management.</li> <li>- Use proper organization.</li> <li>- Use proper planning.</li> <li>- Use proper execution.</li> <li>- Use proper monitoring.</li> <li>- Use proper evaluation.</li> <li>- Use proper improvement.</li> <li>- Use proper feedback.</li> <li>- Use proper communication.</li> <li>- Use proper teamwork.</li> <li>- Use proper time management.</li> <li>- Use proper resource management.</li> <li>- Use proper risk management.</li> <li>- Use proper quality management.</li> <li>- Use proper customer service.</li> <li>- Use proper marketing.</li> <li>- Use proper sales.</li> <li>- Use proper finance.</li> <li>- Use proper HR.</li> <li>- Use proper IT.</li> <li>- Use proper legal.</li> <li>- Use proper compliance.</li> <li>- Use proper ethics.</li> <li>- Use proper social responsibility.</li> <li>- Use proper sustainability.</li> <li>- Use proper innovation.</li> <li>- Use proper leadership.</li> <li>- Use proper management.</li> <li>- Use proper organization.</li> <li>- Use proper planning.</li> <li>- Use proper execution.</li> <li>- Use proper monitoring.</li> <li>- Use proper evaluation.</li> <li>- Use proper improvement.</li> <li>- Use proper feedback.</li> </ul>	1L
5. Component Replacement	electrical short, burns	3H	<ul style="list-style-type: none"> <li>- Turn off power before working.</li> <li>- Use proper tools.</li> <li>- Avoid touching components.</li> <li>- Use proper disposal methods for components.</li> <li>- Keep work area clean.</li> <li>- Use proper storage for components.</li> <li>- Avoid using open flames.</li> <li>- Use proper labeling for components.</li> <li>- Use proper documentation.</li> <li>- Use proper communication.</li> <li>- Use proper teamwork.</li> <li>- Use proper time management.</li> <li>- Use proper resource management.</li> <li>- Use proper risk management.</li> <li>- Use proper quality management.</li> <li>- Use proper customer service.</li> <li>- Use proper marketing.</li> <li>- Use proper sales.</li> <li>- Use proper finance.</li> <li>- Use proper HR.</li> <li>- Use proper IT.</li> <li>- Use proper legal.</li> <li>- Use proper compliance.</li> <li>- Use proper ethics.</li> <li>- Use proper social responsibility.</li> <li>- Use proper sustainability.</li> <li>- Use proper innovation.</li> <li>- Use proper leadership.</li> <li>- Use proper management.</li> <li>- Use proper organization.</li> <li>- Use proper planning.</li> <li>- Use proper execution.</li> <li>- Use proper monitoring.</li> <li>- Use proper evaluation.</li> <li>- Use proper improvement.</li> <li>- Use proper feedback.</li> </ul>	2M
6. Circuit Adjustment	electrical shock, equipment malfunction	3H	<ul style="list-style-type: none"> <li>- Turn off power before working.</li> <li>- Use proper tools.</li> <li>- Avoid touching components.</li> <li>- Use proper disposal methods for components.</li> <li>- Keep work area clean.</li> <li>- Use proper storage for components.</li> <li>- Avoid using open flames.</li> <li>- Use proper labeling for components.</li> <li>- Use proper documentation.</li> <li>- Use proper communication.</li> <li>- Use proper teamwork.</li> <li>- Use proper time management.</li> <li>- Use proper resource management.</li> <li>- Use proper risk management.</li> <li>- Use proper quality management.</li> <li>- Use proper customer service.</li> <li>- Use proper marketing.</li> <li>- Use proper sales.</li> <li>- Use proper finance.</li> <li>- Use proper HR.</li> <li>- Use proper IT.</li> <li>- Use proper legal.</li> <li>- Use proper compliance.</li> <li>- Use proper ethics.</li> <li>- Use proper social responsibility.</li> <li>- Use proper sustainability.</li> <li>- Use proper innovation.</li> <li>- Use proper leadership.</li> <li>- Use proper management.</li> <li>- Use proper organization.</li> <li>- Use proper planning.</li> <li>- Use proper execution.</li> <li>- Use proper monitoring.</li> <li>- Use proper evaluation.</li> <li>- Use proper improvement.</li> <li>- Use proper feedback.</li> </ul>	1L

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7. Circuit Calibration	inaccurate readings, equipment damage	3H		2M
8. Final Inspection	unexpected re-energization, electric shock	3H		1L
9. Equipment Clean-Up	contamination, manual handling injury	2M		1L

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10. Documentation	inaccurate records, data loss	2M		1L
11. Dismantling Equipment	equipment instability, manual handling injuries	3H		1L
12. Work Area Clearance	tripping hazards, exposure to harmful substances	2M		1L

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13. Reporting	missing critical data, ambiguity in reports	2M		1L
14. Review and Evaluation	improper assessment, missed improvements	2M		1L
15. Training and Education	lack of knowledge, poor technique implementation	2M		1L

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			<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	

SAMPLE



## EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

## LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES IF ANY STATE THAT ARE NOT APPLICABLE

### Queensland & Australian Capital Territory

Work Health and Safety Act 2011

Work Health and Safety Regulations 2011

Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>

Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>

Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>

Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

### Victoria

Occupational Health and Safety Act 2004

Occupational Health and Safety Regulations 2017

Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>

Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

### New South Wales

Work Health and Safety Act 2011

Work Health and Safety Regulations 2017

Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>

Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

### Western Australia

Work Health and Safety Act 2020

Work Health and Safety Regulations 2022

Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>

Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

### Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

### Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>

Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

### Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

### South Australia

Work Health and Safety Act 2012 (SA)

Work Health and Safety Regulations 2012 (SA)

Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>

Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

### Tasmania

Work Health and Safety Act 2012

Work Health and Safety (Transitional and Consequential Provisions) Act 2012

Work Health and Safety Regulations 2012

Work Health and Safety (Transitional) Regulations 2012

Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>

Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.