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

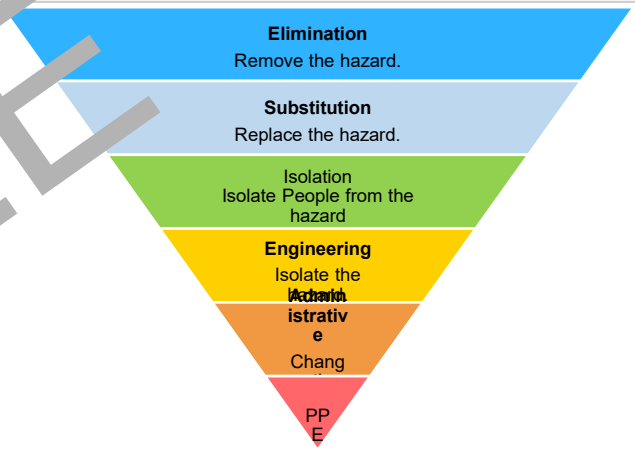
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

CLIENT OR PRINCIPAL CONTRACTOR DETAILS	SCOPE OF WORKS
Client:	
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
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures Monitor and keep records.

Consequence Scale:

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

Notes on Hierarchy of Controls:
Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. Substitute
3. Isolate
4. Engineering
5. Administrative
6. PPE

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

aligned with Safe Work Australia's Managing the risk of fatigue at work *(2023) and ISO 45001:2018 clauses 6–8.*

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. Governance, Legal Compliance & WHS Responsibilities	• Lack of clear allocation of WHS duties under WHS Act 2011 and WHS Regulation • Inadequate understanding of PCBUs, officers and worker responsibilities in electronics repair context • Failure to consult workers on WHS matters and changes to repair methods, tools or test equipment • No systematic review of WHS policies to reflect emerging technologies and repair techniques • Non-compliance with electrical safety, test and tag, and hazardous chemicals legislation • Inadequate incident notification and reporting processes to regulators	4A	• Develop and maintain a WHS Management Syste (WHSMS) aligned with WHS Act 2011, WHS Regulation and relevant Australian Standards (AS/NZS 3000, AS/NZS 3760, AS/NZS ISO 45001) • Define and document WHS roles, respon ities and d diligence obligations for PCBUs, officers, supervisors and workers specific to electroni epair ivities • Establish a consultation procedure for workers d Health and fety Representatives on changes to circuit board repair methods, t equipment and ilities • Implement a legal and standa register covering cal safety, hazardous substances, test and measurement equi nd reg rly audit compliance • Create and plement a d ument WHS cy endorsed by senior management, communicated during induct and refres r training • Esta proce re r notifiable incident identification, internal reporting, regulator notification and corre ction ti ng • Cond t a al WH management reviews to verify effectiveness of systems in electronics repair operati s	3H
2. Competency, Licensing & Technical Training	• Insufficient electrical competence to safely fault-find and repair powered circuit boards • Lack of formal qualifications or licence where required for ele cal work • Inadequate traini in safe use of oscilloscopes, mu eters, supplies and signal tors • Poor understanding of safe work practices for high-voltage, high-c ent or high-frequency circuits • Limited knowledge of electrostatic discharge (ESD) risks to components and potential secondary hazards • Failure to maintain competency in new technologies such as digital signal processing, surface mount devices and complex integrated circuits	4A	• plement a competency framework that defines minimum education, qualifications and licences for ele tronics technicians and supervisors • Require verification and periodic revalidation of electrical licences where applicable, and maintain a licence register • Provide structured induction and role-specific technical training on circuit board repairs, analogue and digital fault finding, and safe testing methods • Deliver training on safe work practices for live testing, energy isolation, and high-voltage/higher power electronic systems referenced to relevant Australian Standards • Provide ESD awareness and handling training including correct use of wrist straps, ESD mats, storage and component handling procedures • Maintain training records and implement a refresher schedule for critical competencies (electrical safety, test equipment, emergency response) • Include competency assessment (theory and practical) before authorising workers to perform independent diagnostics and repairs	2M
3. Design of Workshop Layout, Electrical Installations & Test Benches	• Poor workshop layout leading to trip hazards, cluttered benches and restricted access to emergency exits	3H	• Design workshop layout to provide clear walkways, defined work zones and unobstructed emergency exit routes in accordance with WHS Regulation and building codes • Engage licensed electricians to design and install fixed wiring, outlets, RCD protection and bench supplies compliant with AS/NZS 3000	2M

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	• Inadequately designed electrical distribution, outlets and isolation systems for repair and testing areas • Insufficient segregation between low-voltage electronics benches and higher-voltage or high-current test areas • Lack of dedicated ESD-safe workstations and earthing arrangements for sensitive electronics • Inadequate provision of emergency isolation switches for test benches and power supplies • Cabling congestion and use of temporary leads resulting in mechanical damage and electrical faults		• Create separate, clearly marked zones for low-voltage/electronic diagnostic work and for higher-risk high-voltage or power electronics testing • Install ESD-safe benches equipped with grounded mats, wrist strap points and appropriate earthing verification systems • Fit emergency stop or isolation switches at test benches and high-risk test areas with clear labelling and periodic functional testing procedures • Implement cable management systems (trays, cable ties, retractable leads) and prohibit unsafe use of multi-boards or daisy-chained power boards • Include physical layout, evacuation routes and isolation points in site inductions and emergency drills	
4. Electrical & Energy Isolation Systems	• Failure to isolate energy sources before repair of circuit boards or equipment • Uncontrolled residual energy in capacitors, inductors or batteries on PCBs • Inadequate lockout/tagout processes for equipment under test or repair • Bypassing of protective devices on bench power supplies or test fixtures • Inadvertent energisation of boards while components or probes are incorrectly connected • Poor identification and labelling of high-voltage circuits, power rails and test points	4A	[redacted]	2M
5. Test & Measurement Equipment Management	• Use of uncalibrated or faulty multimeters, oscilloscopes, power supplies and signal generators • Test leads, probes and accessories with damaged insulation or incorrect ratings • Improvised test fixtures increasing risk of short circuits, arcing or component failure	3H	[redacted]	2M

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	• Incorrect measurement range selection leading to instrument damage and electric shock risk • Inadequate storage, maintenance and inspection systems for test equipment • Lack of documented procedures for safe connection and disconnection of probes on live circuits		[redacted]	
6. Electrostatic Discharge (ESD) Control & Sensitive Components	• Damage to electronic components and latent failures due to uncontrolled ESD events • Lack of ESD-safe packaging, storage and transport systems for circuit boards • Workers not grounding themselves before handling sensitive integrated circuits and surface mount devices • Inadequate monitoring and maintenance of ESD control equipme • Failure to identify which boards and components require ESD protection • Hidden reliability is es in repaired equipment leading downstream safety risks in the field	3H	[redacted]	1L
7. Soldering, Rework, Fumes & Thermal Hazards	• Inhalation of solder fumes, flux va urs and decomposition products dur PCB repair • Thermal burns from soldering irons, hot air rework stations and pre-heaters • Poorly controlled reflow or hot air processes creating localised overheating or fire risk • Accumulation of fumes and particulates in poorly ventilated workshop areas • Lack of systems for handling, storing and disposing of soldering consumables and lead-containing wastes	3H	[redacted]	2M

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	• Inadequate maintenance of soldering equipment leading to malfunction or overheating		[redacted]	
8. Hazardous Substances, Cleaning Agents & PCB Contaminants	• Exposure to solvents, flux removers, isopropyl alcohol and other cleaning agents used on circuit boards • Skin and eye irritation or respiratory effects from contact with chemicals and residues on PCBs • Lack of Safety Data Sheet (SDS) management and chemical inventory control • Improper decanting, labelling and storage of chemicals in unapproved containers • Inadequate spill response systems and training for small chemical spills on benches and floors • Uncontrolled disposal of chemical waste and contaminated wipes creating environmental and health risks	3H	[redacted]	2M
9. Manual Handling, Ergonomics & Repetitive Tasks	• Repetitive fine motor movements during soldering, fault finding and probe placement leading to musculoskeletal disorders • Poor seated or standing postures at electronics benches due to inadequate workspace design • Manual handling of heavy or awkward equipment such as power supplies, oscilloscopes and enclosures • Inadequate task rotation or break scheduling for detailed visual inspection and microscope work • Insufficient guidance on ergonomic setup of benches, chairs, lighting and tool placement • Long duration screen and microscope use causing eye strain and discomfort	3H	[redacted]	2M

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10. Work Organisation, Fatigue & Cognitive Load	• Extended periods of concentrated fault finding on complex analogue and digital signal processing circuits leading to mental fatigue • Unrealistic repair turnaround times creating pressure and increased error rates • Inadequate management of overtime, shift work or after-hours call-outs for urgent repairs • Poorly structured work allocation resulting in highly skilled tasks being performed by less experienced staff without supervision • Insufficient planning for peak workloads causing short-cutting of critical checks, tests and isolation procedures • Lack of systems for workers to report fatigue, workload concerns or near misses	3H	[redacted]	2M
11. Information, Documentation & Change Management	• Use of outdated circuit diagrams, service manuals or firmw[illegible]formation when repairing boards • Uncontrolled cha[illegible]es to test procedures, repair [illegible]tools introducing new risks • Inadequate documentation of fau[illegible] finding outcomes, modifi[illegible] deviations from original design • Poor version control of software tools, test scripts and configuration files used in digital signal processing testing • Lack of systematic communication of lessons learned from incidents, defects and near misses • Insufficient protection of customer data or proprietary information embedded in electronic devices	3H	[redacted]	1L
12. Emergency Preparedness, First Aid & Incident Response	• Delayed or ineffective response to electric shock, burns or chemical exposure incidents	3H	[redacted]	1L

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Inadequate planning for small fires originating from electronic equipment or test setups • Lack of first aid coverage during all working hours • Insufficient worker knowledge of emergency procedures, isolation points and evacuation routes • Poor reporting and investigation of minor incidents and near misses leading to repeated events • Emergency equipment (extinguishers, eye wash, first aid kits) not maintained or not appropriate for electronics environment		[redacted]	
13. Contractor, Supplier & Outsourced Repair Management	• Contractors performing specialised electronics repair or calibration work without adequate WHS controls • Supplied equipment, components or tools not meeting required safety standards • Lack of communication of site-specific hazards and procedures to visiting technicians or OEM representatives • Outsourced repair work not subject to same WHS and quality controls as in-house work • Unclear responsibilities for risk controls where multiple PCBUs share a workplace • Insufficient verification of contractor competence for high-risk testing or modifications	3H	[redacted]	2M
14. Quality Assurance, Testing Integrity & Product Safety in Use	• Inadequate final testing of repaired circuit boards leading to latent faults and field failures • Bypassing or defeating safety interlocks or protective components during repair	4A	[redacted]	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Use of non-equivalent or substandard replacement components for safety-related circuits • Insufficient segregation of tested and untested boards or equipment leading to release of unsafe products • Failure of test software or automated test equipment to detect certain fault modes • Lack of feedback loop from field failures or customer complaints into repair processes		[redacted]	
15. Security, Access Control & Data/Intellectual Property Protection	• Unauthorised access to test areas where hazardous voltages or complex setups are present • Interference with ongoing tests, leading to damaged equipment or exposure to live circuits • Loss or misuse of customer data contained on devices being repaired • Theft or tampering with critical test equipment, fixtures or firmware • Unauthorised modifications to test scripts, calibration settings or diagnostic software • Visitors or non-technical staff entering electronics lab areas without awareness of hazards		[redacted]	2M

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 FOR 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

New South Wales
Work Health and Safety Act 2011
Work Health and Safety Regulations 2025
Legislation NSW: https://www.safework.nsw.gov.au/legal-obligations/legislation
Codes of Practice NSW: https://www.safework.nsw.gov.au/resource-library/list-of-codes-of-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/forms-and-resources/codes-of-practice

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.

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

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

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