



Australian Government

ICTDRE302 Locate and rectify digital reception equipment faults

Release: 1

ICTDRE302 Locate and rectify digital reception equipment faults

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to locate and rectify all types of customer digital reception equipment (DRE) faults on a customer premises as part of a home network.

It applies to individuals who install and maintain integrated services in digital receiving equipment or small business networks, and who apply skills and knowledge in this unit to locate and rectify faults of DRE home networks such as broadband, digital TV, free to air (FTA), subscription TV (pay TV) and internet protocol TV (IPTV).

No licensing, legislative or certification requirements apply at the time of publication.

Unit Sector

Telecommunications – Digital Reception Technology

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for DRE fault identification	1.1 Obtain relevant legislation, codes, regulations and standards for compliance when conducting work 1.2 Notify customer to verify fault report and arrange for site access to comply with security arrangements 1.3 Notify supervisor of identified safety hazards at worksite and complete a job safety analysis (JSA) before commencing work 1.4 Identify existing warranties, service agreements and equipment specifications and documentation covering digital reception equipment

ELEMENT	PERFORMANCE CRITERIA
	1.5 Select and obtain tools and materials appropriate for the work order
2. Assess likely cause and location of fault	2.1 Verify system details to assist with fault identification 2.2 Assess available data and historical trends to determine likelihood of fault being the set top fault or existing customer equipment or cabling fault 2.3 Rank likely causes of fault in order of probability ensuring a methodical approach to fault-finding is used 2.4 Discuss problem fully with customer and advise of likely charges
3. Perform tests to diagnose fault	3.1 Conduct visual inspection of system for likely damage following work health and safety (WHS) and environmental requirements 3.2 Check connections, plugs, terminations and leads for operation 3.3 Measure signal strength at wall plate and beyond to ensure adequate signal level for equipment processing 3.4 Conduct functional test of facilities to identify faulty equipment 3.5 Progressively isolate fault to remove likely variables from assessment using manufacturer's diagnostic chart 3.6 Locate fault with minimal disruption to client activity, in the shortest possible time 3.7 Provide customer with regular progress reports
4. Rectify faults	4.1 Identify faulty cabling parts and equipment and replace or repair according to service agreement 4.2 Advise customer of cost of repair if service agreement does not exist 4.3 Re-program equipment to customer requirements if required 4.4 Complete work in a manner safe to repairer and customer
5. Provide replacement service to customer	5.1 Provide customer with temporary replacement equipment similar to existing equipment while faulty equipment is being repaired 5.2 Program replacement equipment to customer requirements 5.3 Test replacement service for functionality before handover – to meet customer satisfaction
6. Clean up worksite and complete documentation	6.1 Remove waste and debris from site and dispose of in a safe and environmentally appropriate manner 6.2 Restore site to original condition and customer satisfaction 6.3 Prepare invoices and other financial documentation, where required, and present to customer 6.4 Obtain authorised signatures on required documentation to confirm

ELEMENT	PERFORMANCE CRITERIA
	acceptance of completed work

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.4, 2.1	Interprets textual information from relevant sources to identify key information
Writing	1.3, 3.3, 3.5, 6.3,	Uses clear, specific and industry-related terminology to complete workplace documentation
Oral Communication	1.2, 2.4,	Articulates clearly using appropriate language for environment and uses listening techniques to confirm understanding
Numeracy	3.3	Takes readings and measurements and interprets results
Navigate the world of work	1.1, 1.5, 5.1, 6.1-6.4	Takes responsibility for following safe, sustainable, appropriate and efficient workplace procedures
Interact with others	4.2, 6.4	Deals with customer to provide reports and sign-off on completed work
Get the work done	2.1-2.3, 4.1, 4.3, 4.4, 5.2, 5.3,	Plans, organises and implements tasks efficiently to meet customer requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTDRE302 Locate and rectify digital reception equipment faults	ICTDRE3157B Locate and rectify digital reception equipment faults	Updated to meet standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTDRE302 Locate and rectify digital reception equipment faults

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Performance Evidence

Evidence of ability to:

- determine parameters for addressing digital reception faults for a customer and keep customer informed on progress
- apply a methodical approach to fault identification
- use test equipment to identify faults
- interpret test results
- install temporary equipment while repairs are affected
- repair faults, repair cable terminations or replace faulty cable equipment and test to verify correct function
- complete documentation in accordance with enterprise requirements and present to customer for approvals.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- discuss broad knowledge of whole industry product range
- outline customer service principles, particularly dealing with customers face to face
- explain enterprise methods for test analysis and diagnosis
- discuss enterprise or service specific knowledge of products and services supplied
- review work health and safety (WHS) general principles and enterprise specific job safety analysis (JSA) requirements
- give an overview knowledge of:
 - objectives and methods of training for product use for customer education
 - radio frequency (RF) theory, principles and safety
 - telephony principles to support return path awareness

- identify pre-installation enterprise-specific requirements
- state quality assurance of enterprise requirements
- explain return path technology
- list signal measurement and other enterprise-specific tools
- discuss understanding of contemporary equipment and connection methods.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the Telecommunications – Digital Reception Technology industry and include access to:

- site for digital reception equipment installation
- digital reception equipment currently used in industry
- test equipment required for digital reception equipment installation and testing.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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