EMC
Technologies

Australia Telecommunications Equipment & the A-Tick

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LABORATORIES

Why have Compliance Regulations in Australia?

- The basic concept of all Australian regulatory requirements is to consider the use of the device when operated by an **UNAWARE USER**.

- The regulations consider :

  - Safety of users, operators, service personal and equipment.
  - Protection of networks
  - Interference with communications

Who is the Australian regulator for A-tick ⟁ & C-tick ◖ ?

- Federal Government - Australian Communications and Media Authority (ACMA)
  – Telecommunications' Issues, A-tick,
  – EMC Issues, C-tick
  – RF issues, C-tick
  – EMR (SAR) issues, C-tick

Telecommunications Devices subject to Labelling with the A-tick

- These devices include :
  - Cordless Phones
  - Mobile Phones
  - PSTN Telephones
  - Modems (including ADSLModems)]
  - PABX's, System Integral Phones
  - IP Phones, VoIP Phones & IP PABX
  - ATA, IAD
  - Cabling and connectors

Telecommunications : A-tick

- All telecommunications equipment on the customer side of the Telecommunications Network Boundary are subject to ACMA compliance (not just those items directly connected to a telecommunications network interface).

- All telecommunications equipment identified in the ACMA Telecommunications Labelling Notice must comply and be marked with the A-tick

- International Compliance does not guarantee compliance to ACMA Requirements.

Telecommunications Labelling Notice

- Specifies the requirements for labelling Customer Equipment and Cabling Products

- These requirements (which are controlled by the ACMA) deal with :

  - health & safety of users & network staff
  - emergency service access
  - integrity of the telecommunications network
  - interoperability with the telecommunications network

- Indicates the obligations of importers and manufacturers to label Telecommunications Equipment.

Self-Regulation Scheme

- This is not a self-declaration or self-certification scheme.

- There must be proof that Customer Equipment complies in a Compliance Folder held by an Australian entity.

- The sources of documentation are defined in the Labelling Notice.

- International Compliance does not guarantee compliance to ACMA Technical Standards.

AS/ACIF Standards

- The ACIF (Australian Communications Industry Forum) now has the power to prepare Technical Standards.
- ACIF Working Groups for Technical Standards are made up of regulators (ACMA), Test Labs, Manufacturers, Importers & Consultants.
- The objective is to remove the ACMA from the role of writing of standards and passing this responsibility to industry.

Schedule 1 of Labelling Notice - Application

- Schedule 1 details the testing requirements to the appropriate ACMA Standards for product types.

- The list is written in broad terms and should be viewed as a guide.

- More than one category may apply to a product, eg System Integral Terminals to B29 & C33 or Modems to A2 & A22.

Compliance Level 3

- ACMA Technical Standard Reports for Compliance Level 3
  - Must be from an Recognised Testing Authority (A list is available from NATA); or
  - Type Approval (Schedule 7) with an appropriate test report for the Australian Differences.

Compliance Level 2

- ACMA Technical Standard Reports for Compliance Level 2
  - Independent test report; or
  - Recognised Testing Authority test report; or
  - Internal test report; or
  - European Type Approval (Schedule 7) with a test report for the Australian Differences

Compliance Requirements for ADSL Devices

- The use of ADSL is growing rapidly for the implementation of Broadband Internet connectivity and IP voice telephony services.

- The ADSL Modems and Routers that connect directly to the telecommunications network or indirectly to a local DSLAM must comply with the requirements for Category A50 of the ACMA Telecommunications Labelling Notice.

Compliance Requirements for ADSL Devices

- ADSL Equipment must comply with the following standards and be labelled with the A-tick:

- AS/NZS 60950 - Safety Requirements

- AS/ACIF S043 - Customer Equipment for connection to a metallic local loop interface

- AS/NZS CISPR22 - EMI Emissions

- FXO, FXS and other interfaces add further compliance requirements to AS/ACIF Standards

Telstra IP1149 Testing for ADSL Devices

- Must be tested accordance with Telstra Specification IP1149.

- This testing is an endorsement process of the performance of an ADSL Modem or ADSL Router under specified limits as established by Telstra.

- Provides confidence in the performance of a modem inter-operating with Telstra ADSL DSLAM.

IP Telephony – VoIP Phones

- A stand-alone IP phone that can be connected to a customer switching system or gateway service through the internet, is regarded as a system integral terminal (SIT) and required to comply with applicable ACMA standards as identified by Schedule 1 of the Telecommunications Labelling Notice.

- Stand-alone VoIP equipment identified in the ACMA Telecommunications Labelling Notice must comply and be marked with the A-tick

IP Telephony – VoIP Phones

Testing Requirements.

- Equipment must comply with the following standards:
    - AS/NZS 60950
    - AS/ACIF S004-2001(Safety factors only)
    - AS/NZS CISPR22 : 2002:

IP Telephony – VoIP Soft Phone

- An IP software phone that only connects to the Internet via an Internet service provider is exempted from the requirements of the Telecommunications Labelling Notice (see Schedule 2).

IP Telephony – IP PABX Devices

- **IP PABX's will require A-tick** where telephony connection is made to other parties via a standard telecommunications network (including via a remote IP Gateway or a direct interface of the PABX).

- ACMA Telecommunications Labelling Notice categories may include A1, A9, A11 and B31.

- They may also include an indirect connection to the telecommunications network via an xDSL interface (Category A50) or Ethernet interface.

IP Telephony – IP PABX Devices

- IP PABX's can also be fitted with an FXS port where telephony services are provided via an extension port to terminal equipment such as a telephone, fax machine or answering machine. These interfaces for telephone extensions are covered under **Category B31** of the Labelling Notice for compliance to AS/ACIF S003.

IP Telephony – IP PABX Devices

- IP PABX fitted with a FXO PSTN interface port to connect to a standard telephone line for power fail or alternative operation, then the following standard will also apply:

  – AS/ACIF S002-2001

- IP PABX's is fitted with an ISDN or E1 interface port for alternative operation, then additional ACMA requirements should be applied.

IP Telephony – ATA & IAD Devices

- Equipment must comply with the following standards:
  - AS/NZS 60950
  - AS/NZS CISPR22

- If the IP Device is fitted with a Plain Ordinary Telephone Service (POTS) interface port for the connection of a telephone, answering machine, facsimile machine or modem, then the following applies:
  - AS/ACIF S003-2001

IP Telephony – ATA & IAD Devices

- If the IP Device is fitted with a PSTN interface port to connect to a standard telephone line for power fail or alternative operation, then the following AS/ACIF Standard applies:
  - AS/ACIF S002-2001 (Amdt 1)

Acceptability of European Standards & Test Reports

- Customer Equipment Labelled Equipment
  - IEC60950, EN60950 - Safety
    - **Not acceptable, but may be used as a source to prepare an AS/NZS 60950 safety compliance (if it is from a source that meets Telecommunications Labelling Notice requirements).**
  - EN55022, CISPR22
    - **Must meet ACMA EMC requirements and to the appropriate amendments.**

Acceptability of US Standards & Test Reports

- UL60950 - Safety
  - not acceptable for Australian Compliance

- EMI to FCC Part 15 - EMI
  - not acceptable for Australian Compliance
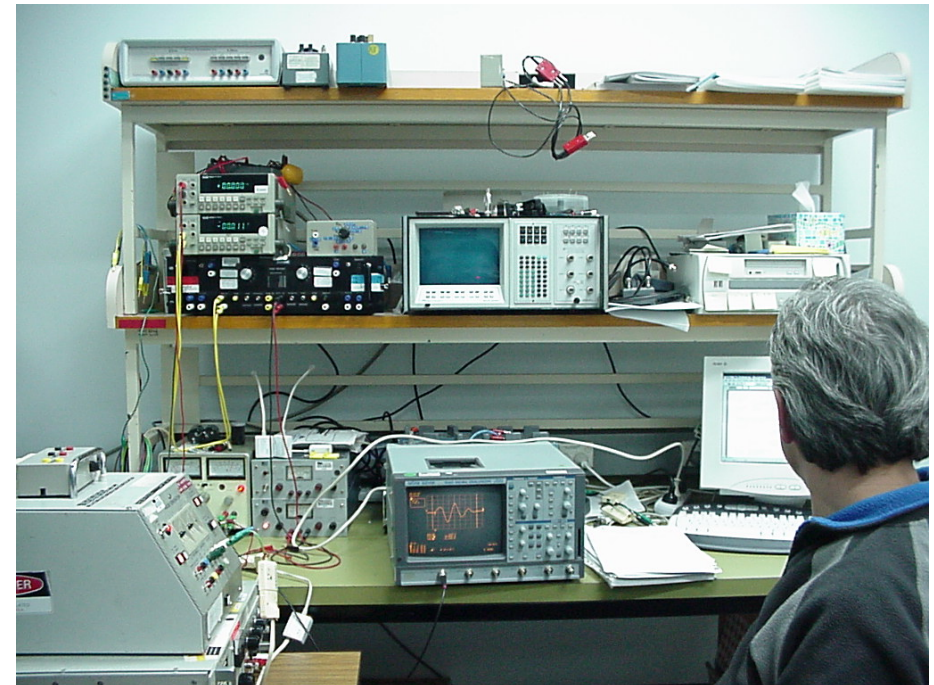
Labelling Customer Equipment

- The form of the Label is Specified in Labelling Notice, Schedule 3. and includes :
  - Business Name & Address In Australia or Personal Name & Address In Australia or ABN Number or Registered Trade Mark or Supplier Code Number
  - Minimum height of logo : 3mm
  - Minimum height of characters : 1mm

△✓ Label

- **Use only the A-Tick.**
- The ACMA has announced that the labelling requirements for telecommunications equipment only requires the application of the A-Tick on the label to denote compliance with EMC, Radiocommunications and Telecommunications requirements.

Variants or Modifications of Labelled Customer Equipment

- Any variation or modification to the Customer Equipment must be fully documented and kept in the compliance folder.

- The impact of the change with relation to the applicable ACMA Technical Standard is to be documented.

- Provide technical rationale for conformity or have the Customer Equipment retested.

Is it necessary to Retest?

• if the Customer Equipment has variations / modifications which impact of one of applicable compliance standards of the Labelling Notice.

The device will require retesting.

• if the Customer Equipment has variations / modifications which do not impact on any of the applicable standards of the Labelling Notice.

The device may not require retesting depending upon the changes in the applicable standards.

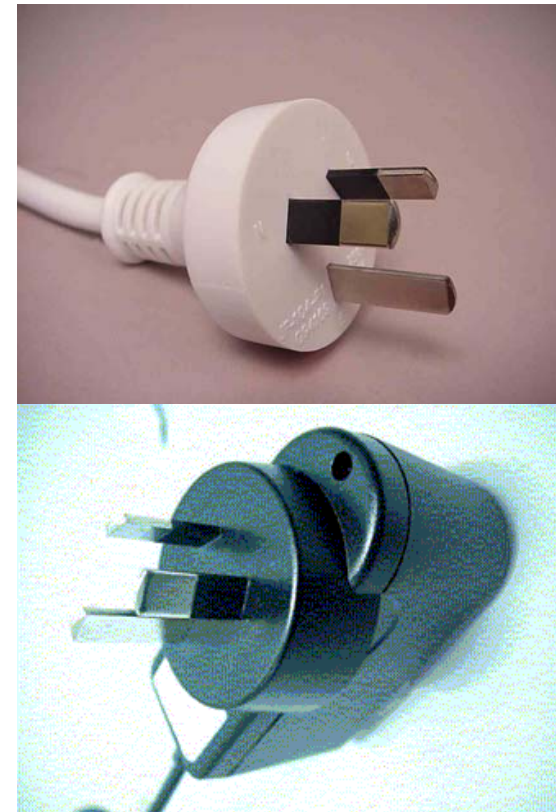# Australia- Telecommunications Network Equipment, Safety & EMC

Minimum Safety requirements for Telecommunications Network Equipment

- All items of electrical equipment including telecommunications network equipment are required to meet Australian/New Zealand safety standards and be appropriately labelled.

- The latest version of AS/NZS 60950 applies to Telecommunications Network Equipment

All Electrical Equipment to have Insulated Pins by April 2005

- Insulated pins must be fitted to all single phase products (electrical devices, appliances, consumer electrical products, power cords, etc) by April 2005

- Illegal to supply devices after April 2005 without insulated pins.

EMC – Telecommunications Network Equipment

- The EMC requirements for Australia apply to telecommunications network equipment and customer equipment.

- Compliance level 2 applies (must have test reports)

- Acceptable reports are :
  - AS/NZS CISPR22 (Australian/New Zealand)
  - EN55022 : 1998 (European)
  - ETSI EN 300 386 only if it refers to testing performed to the EN55022 Limits (European)

EMC – Telecommunications Network Equipment

- For telecommunications equipment to be supplied into the Australian market, only emission testing by is required.

- All Telecommunications Network Equipment must comply with the current version of AS/NZS CISPR22 and be labelled with the C-tick

New Zealand: Telecommunications Equipment & the Telepermit

Regulated Scheme
of Telecom New Zealand

- The New Zealand Telecommunications Act requires that Customer Equipment can only connected to a carrier's network once the carrier has agreed to connection.

- By default, most New Zealand carriers recognise the Telepermit from Telecom New Zealand as sufficient evidence that Customer Equipment can be connected to their network.

Products that can display the Telepermit Label

- Any Customer Equipment that has an interface port designed to connect to an identified telecommunications service.

- The Customer Equipment has been tested by an Accredited Laboratory and a test report has been sent to Access Standards to obtain a Telepermit.

- A Telepermit has been issued and a unique Telepermit Number has been issued by Access Standards.

Telepermit Requirements

- Transmission and signalling meets the requirements of the relative PTC or TNA Standard issued by Access Standards of Telecom New Zealand.

- Complies with Electrical Safety requirements of AS/NZS 60950.

- Telepermit applications has been made and approved by Access Standards of Telecom New Zealand.

- General Conditions specified in PTC 100 which can be downloaded from www.telepermit.co.nz

www.emctech.com.au   www.comtest.com.au

Access Standards – Telecom New Zealand

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