



AUSTRALIAN RAIL TRACK CORPORATION LTD

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Discipline
Engineering Standard – NSW

Category
Signalling

Title
**Security, Fire Protection, Weather Proofing
and Cleanliness of Signalling Equipment,
Housings and Locations**

Reference Number
SMP 20 – (RIC Standard: SC 00 52 00 20 SI)

Document Control

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The technical content of this document has been approved by the relevant ARTC engineering authority and has also been endorsed by the ARTC Safety Committee.

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About This Standard

This Standard defines the signalling procedures to be implemented for the security, fire protection, weather proofing and cleanliness of signalling equipment, housings and locations.

Document History

Primary Source – RIC Standard SC 00 52 00 20 SI Version 2.0

List of Amendments –

ISSUE	DATE	CLAUSE	DESCRIPTION
1.1	14/03/2005	Disclaimer	Minor editorial change

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1 GENERAL

Relay rooms, walk-in enclosures and lower floors of signal boxes and apparatus cupboards shall be kept clean and tidy. They shall be kept locked whenever possible. Surplus material shall not be stored in these places, unless it is neatly placed in racks or cupboards provided specially for that purpose. Highly inflammable material shall not be stored in these places.

Cleanliness and tidiness of signalling equipment and its surroundings facilitates access and visibility of the equipment for maintenance inspection and work as well as minimising the potential for failure caused by dirt and dust, corrosive conditions, loose objects obstructing or shorting out equipment, fire etc.

1.1 Security

Where electric locks are in use on interlocking machines, other than electric locks on Distant Signal levers, the doors, in the case of elevated boxes, or trap doors in platform level signal boxes, shall be secured by padlock or night latches.

In the Metropolitan Area, locations are secured by Series 9 Yale, Series 8 or 12 Best and Series 4 Falcon locks.

Outside the Metropolitan Area, locations are secured by Series 6 Yale or Series 8 or 12 Best locks.

When it is necessary for the signaller to have access to the underportion of the signal box, for the purpose of adjusting signal wires, a Series 19 Best or Series 7 Falcon lock shall be provided.

Where a moveable section of flooring is provided in signal boxes above locking boxes, this section shall be secured with tower bolts on the underside to prevent interference by unauthorised persons.

All signalling equipment operating mechanisms, relays, contacts, terminals etc, shall be housed in equipment units or in cupboards locked by an ARTC approved security lock to prevent interference by unauthorised persons.

Locking arrangements are to be maintained in good condition and signalling apparatus and locations are to be left securely locked. Before closing up and locking equipment or locations, signalling personnel shall check that everything is in order and properly connected and that nothing has been left loose, foul of standard clearances, or in a potentially unsafe condition.

1.2 Prevention of Water Ingress

Signalling maintainers are to keep insulating surfaces between electrical terminals clean and free from water to prevent leakage currents.

Signalling maintainers are to ensure that huts and locations etc, which house shelf relays and other similarly vulnerable items, are properly sealed to prevent the ingress of rainwater.

Conduit entries to trackside apparatus near ground level should be sealed with appropriate neutral cure silicon or similar sealants.

During routine maintenance signalling maintainers are to look for signs of water leakage and take appropriate corrective action.

During wet weather signalling maintainers are to avoid carrying out preventative maintenance which would allow water to enter equipment.

During wet weather signalling maintainers should examine the drainage around electrical apparatus to ensure water does not build up and enter the equipment, check locations housing vulnerable equipment for leaks, and remove any rubbish, cans etc, that have been blown or washed foul of operating equipment, drains, or into V or K crossings near insulated block joints etc.

After heavy rains signalling maintainers should check equipment in vulnerable locations, clean and dry as necessary and utilise approved lubricating, penetrating and anti-corrosion sprays where advantageous.

The signalling maintainers in charge of maintaining a section is responsible for reporting details of any water ingress which affects signalling equipment, to the Signal Maintenance Engineer.

1.3 Tidiness

Extensive damage may be caused to cables and equipment by fire; therefore inflammable materials such as paper, wood shavings, scrap timber, spent cleaning material and litter shall be cleared from and not be left near any cables, signal boxes, relay rooms, walk-in enclosures, equipment cupboards or cable pits and ducts.

1.4 Fire Prevention

It is essential that all signalling maintainers should take every precaution for the prevention of fires in or around signalling equipment and signal boxes and any situation considered to be a fire hazard shall be reported to the Signal Maintenance Engineer.

The underneath portions of elevated relay huts and equipment cupboards shall be enclosed to prevent the accumulation of rubbish.

Signalling maintainers are responsible for ensuring that combustible material does not accumulate near in or around signalling apparatus, cables, cupboards or huts.

1.5 Keys

Safeworking and signalling keys are issued to signalling maintainers who are authorised to use them in the performance of their duties. Signalling maintainers issued with the keys are responsible for their security and must not permit unauthorised persons to use them.

Any loss of issued keys must be reported to the Signal Maintenance Engineer at the first opportunity after the loss is detected and the loss reported in writing detailing the circumstances.

Issue of replacement keys are to be arranged by the Signal Maintenance Engineer.

Persons who are not required, as part of their normal duties, to examine or work on specific signalling equipment's are not permitted entry to signalling locations housing such equipment, except under supervision.

Other than in emergencies, signalling maintainers who do not belong to the particular maintenance area are not to interfere with equipment on the particular maintenance area unless authorised by the Signal Maintenance Engineer responsible for the area concerned.