

# Signal Circuit Correlation Check

## Applicability

ARTC Network Wide		Western Jurisdiction		New South Wales	✓	Victoria	
-------------------	--	----------------------	--	-----------------	---	----------	--

Audience	Main Points	Amendment Record
Design Engineers Commissioning Engineers Test Engineers Project Engineers	Correlation Check Instruction Sheet Test Methods Test Records	

### 1. Introduction

When undertaking alterations to existing signalling circuits, there is a need to confirm that the circuit being amended is in accordance with the reference design. A Correlation Check shall be undertaken.

### 2. Signal Circuit Book Instruction

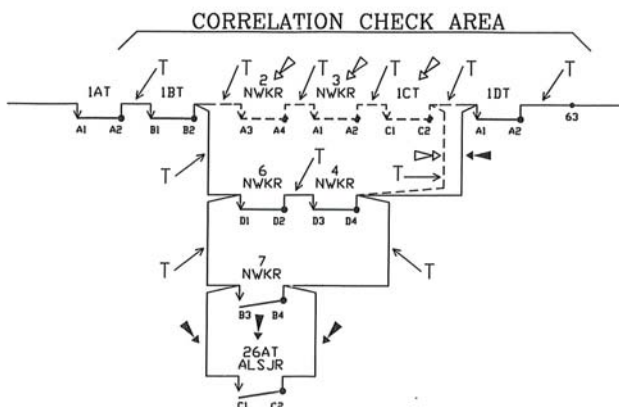
A Signalling Circuit Book Page must be included at the front of every circuit book issued for construction or testing. The attached reference page is available in scanned or CAD format for this purpose. This shall be included immediately after the Circuit Book Cover and Control sheet(s). This is only required where existing circuits are being amended. If the Signal Circuit Book is for a new installation which totally replaces the existing design, then the sheet may not be required.

### 3. Signal Circuit Correlation Check

The following process shall be followed in undertaking the Correlation Check.

- 1) Before any alterations are carried out to existing wiring, a correlation check must be made between the circuit changes shown and the on-site wiring to ensure that they are the same.
- 2) The new circuit sheet is first compared to the existing Field Maintenance copy of the respective circuits. Ensure that there are no discrepancies before proceeding. If a discrepancy is found the design and existing maintenance circuit book to be referred back to the design engineer.
- 3) The existing circuits are physically tested by hand tracing the wiring and wire-counting at each termination point within the affected area. This check is to extend to one unaltered 'clean' termination point on each side of the alteration.

#### EXAMPLE



The above diagram shows each wire or termination to be tested / confirmed.

<b>Issued by</b>	<b>Date</b>
John Furness, Manager Standards	30 April 2008

- 4) This correlation shall be performed prior to the removal of any wires. The same level of testing shall be performed after the new wiring has been installed.
- 5) All wires tested shall be recorded on the Testing Copy of the Signalling Circuits. Each wire tested is indicated by a tick or similar mark. The Testing Copy shall have a stamp indicating "Tested By", with the Tester's Name, Signature and Date.

#### **4. Distribution**

ARTC Signal Engineers and Managers are to ensure that all staff are issued with this Bulletin and via Toolbox and other meetings that they understand the application of these processes.

All ARTC Contractors and Alliance Partners are to ensure that all Design, Installation and Testing staff are issued with this Bulletin and via Toolbox and other meetings that they understand the application of these processes.

Figure 1: Sample Sheet with NSW drawing symbols (other states to use respective symbols)

2/1/02	7:32	Rev 01	CREWIRE.	SHT: RE.	CB: REV
--------	------	--------	----------	----------	---------

## CORRELATION CHECK INSTRUCTION SHEET

BEFORE ANY ALTERATIONS ARE CARRIED OUT TO EXISTING WIRING, A CORRELATION CHECK MUST BE MADE BETWEEN THE CIRCUIT CHANGES SHOWN AND THE ON-SITE WIRING TO ENSURE THEY ARE THE SAME.

THIS MUST BE DONE BY HAND TRACING THE WIRING AND WIRE-COUNTING EACH TERMINATION POINT WITHIN THE AFFECTED AREA. THIS CHECK IS TO EXTEND TO ONE UNALTERED 'CLEAN' TERMINATION POINT ON EACH SIDE OF THE ALTERATION.

EXAMPLE

Job Number:  
AS07630  
22 Oct 2007

THE CIRCUIT WIRING MUST BE HAND TRACED AND WIRE-COUNTED .  
FROM 1A1(A2) TO TERMINAL (63). AS INDICATED BY →T

## ANY DISCREPANCIES MUST IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE SIGNAL DESIGN SECTION.