



AUSTRALIAN RAIL TRACK CORPORATION

Certificate No.: **S 02 1104 112**

## NEW EQUIPMENT & SYSTEM APPROVAL CERTIFICATE

**Approval date:** 10<sup>th</sup> April 2013

**Approved by:** Review Panel

**Report no.:** TAS-02-1104-BO112

**Report date:** 11<sup>th</sup> February 2013

This certificate is issued to:

**Supplier:** **Bombardier**

In respect of:

**Manufacturer:** **Bombardier Transportation Australia Pty Ltd**  
35-45 Frankston Dandenong Road  
Dandenong  
Victoria 3175  
Australia

**Product description:** **ML TI21 DIGITAL RECEIVER**

**Item identification:** See approved item list

**Application:** ML TI21 Digital Receiver to be used on the entire ARTC network

**Relevant Standards:** SPS 02 – 'Environmental Conditions';  
SPS 21 – 'Audio Frequency Jointless Track Circuits for Main Line'  
SPS 25 – 'Signals Circuits Design Standards'

**Conditions of Approval:**

1. For use in accordance with ARTC signals construction standards and standard typical circuits only.
2. Only components from the list may be utilised.
3. Any changes to the design or materials are not covered by this approval certificate and are to be submitted to ARTC to be re-approved.

*A general condition of approval is that the supplier remains accredited to ISO 9001 specifically for these products and ARTC is advised on a 12 monthly basis that accreditation is current. ARTC reserves the right to conduct its own audit of the manufacture and supply of these components to AS 19011:2003.*

*Any subsequent change to the design, materials or manufacturing process is not covered by this approval.*

**Note/Comments:** None

**Issue date:** 19<sup>th</sup> April 2013

**Expiry date:**

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**Issued by:**

John Furness  
ARTC Manager Standards

## NEW EQUIPMENT & SYSTEM APPROVAL - APPROVED ITEM LIST

Reference no.: **TAS-02-1104-BO12**  
 Date: **11<sup>th</sup> February 2013**  
 Product description: **ML TI21 DIGITAL RECEIVER**  
 Certificate no.: **S 02 1104 112**

The following lists the individual types (by catalogue number) of TI21 Digital Transmitter Equipment manufactured by Bombardier which are submitted for type approved use in signalling circuits on ARTC infrastructure under Type Approval Certificate **TAS-02-1224-BO127** subject only to any conditions shown on that Certificates and the Conditions of Use shown against individual types.

| Catalogue No.                | Type           | Type Description   | Conditions of Use                |
|------------------------------|----------------|--|----------------------------------|
| ML TI21 Track circuit        |                |  |                                  |
| L520002390 (50V Relay Drive) | Track receiver | TI21 Digital Receiver Unit Mod strike 3                  | For use with TI21 track circuits |
| L520002500                   | Set up key     | Receiver set up key                                      |                                  |
| L520002329                   | Mounting Plate | Standard Mounting Plate for TI21 Digital Receiver        |                                  |
| L520008862                   | Mounting Plate | Rear Connection Mounting Plate for TI21 Digital Receiver |                                  |
| L520002422                   | Key            | Frequency A Key  |                                  |
| L520002423                   | Key            | Frequency B Key  |                                  |
| L520002424                   | Key            | Frequency C Key  |                                  |
| L520002425                   | Key            | Frequency D Key  |                                  |
| L520002426                   | Key            | Frequency E Key  |                                  |
| L520002427                   | Key            | Frequency F Key  |                                  |
| L520002428                   | Key            | Frequency G Key  |                                  |
| L520002429                   | Key            | Frequency H Key  |                                  |
| 520001222                    | Connector      | 9-Way Female Straight                                    |                                  |
| 520001224                    | Connector      | 9-Way Female right-angle                                 |                                  |
|                              | Track Receiver | TI21 Digital Receiver Mod Strike 2                       |                                  |