



## Introduction

UIC/ERIG has established formalised testing and approval requirements for GSM-R terminals to ensure that the EIRENE specifications are met.

These standards are used as a basis for the formal Norwegian homologation process, which has been conducted since the start of 2006. Approvals are granted to allow products access to the Norwegian National GSM-R Network. All GSM-R products must be approved by Bane Nett before use is allowed in Norway. This is to ensure the terminal functions properly within the Norwegian GSM-R Network.

## Prerequisites

An EC Declaration of Conformity, along with the relevant Notified Body test results, must be presented before the approval process can begin. CE-mark, environmental requirements, EMC and ETSI compliance must also be documented.

Providing documents proving the product is in regular use in one or more GSM-R network is also an advantage.

## Requirements

A specification for terminals to be used in the Norwegian GSM-R Network has been compiled. This specification was also used in the first phase of the network rollout project. The current specification has undergone changes and continues to be revised.

To perform the homologation process, a minimum of two terminals (only one Cab Radio) must be made available to Bane Nett. The terminals and software must be of the same type and version as those which will be set in operation. Terminals must be sent and returned at no cost to Bane Nett.

Bane Nett requires a contact person during the approval process. This person shall have access to relevant technical resources that, without undue delay, can give qualified answers or clarification concerning technical matters.

## Documentation

Approvals are based on test results and a review of product documentation. As a minimum, the following or similar documents must be disclosed:

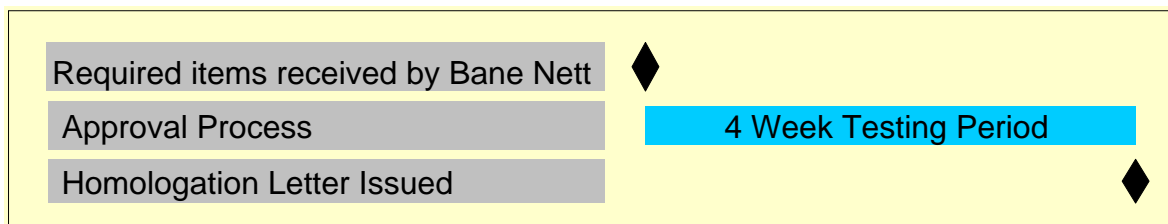
- List over equipment, type and software version, submitted for the test
- User guide
- Documentation showing EC Declaration of Conformity regarding:
  - Directive 2008/57/EC – Interoperability of the Rail System within the Community
  - Directive 99/05/EC – Radio and Telecommunications Terminal Equipment
- Compliance with the current version of EIRENE System Requirements Specification (SRS) and EIRENE Functional Requirements Specification (FRS)



- If approved for use in another GSM-R network:
  - Requirement specification of mobile stations in the particular network(s)
  - Approval documentation
  - Approval certificate
  - Number of terminals in regular use
  - Functions regularly in use
  
- Installation guide
- Commissioning guide
- Technical specification and description
- Functional description
- Document list, including certificates

## Approval Process

A testing period will be assigned after all required items have been submitted to Bane Nett and all necessary resources are available. Bane Nett will then perform the appropriate tests and document reviews during a period of 4 weeks.



In the case where problems cannot be solved immediately, a new testing period will need to be assigned for the continuation of the approval process.

## Costs

A charge may apply for taking a product through the approval process. Fees are based on current rates. If a charge is to be applied the representative will be informed prior to testing. The party applying for the approval will additionally be required to cover shipping and other direct costs related to the approval process.

## Result

Provided that the product passes Bane Nett's tests and document reviews, a Homologation Letter will then be issued, valid for a specified time. The terminal designation and approved software versions may also be listed in Type Approved GSM-R Terminals on the Norwegian National Rail Administration's website, located at

<http://www.jernbaneverket.no/en/Startpage/Market/GSM-R-mobile-services/>.



## **Changes**

Any extensions to the approval, prior to the expiration date, may or may not require additional testing. All changes made to the terminal or software must also be approved by Bane Nett prior to release in Norway and may require additional testing.