Industry Canada

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Spectrum Management

Broadcasting Equipment Technical Standard

Technical Standards and Requirements for FM Transmitters Operating in Small Remote Communities

Broadcasting Equipment Standards Procedure BESP-100, issue 1, *Certification of Broadcasting Equipment*, has been rescinded as described in Gazette Notice SMSE-008-15. Broadcasting equipment subject to the standards and requirements of this Broadcasting Equipment Technical Standard (BETS) shall be certified under the certification procedures set forth in Radio Standards Procedure RSP-100, *Certification of Radio Apparatus and Broadcasting Equipment*.

Canada

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Purpose

This document contains the technical standards and requirements for the issuance of a Technical Acceptance Certificate (TAC) for FM transmitters operating in the 88 to 108 MHz band to provide a very low power FM broadcasting service to small remote communities.

A certificate issued for equipment classified as type approved or as technically acceptable before the coming into force of these technical standards and requirements is considered to be a valid and subsisting TAC.

A Technical Acceptance Certificate is not required for equipment manufactured or imported solely for re-export, prototyping, demonstration, exhibition or testing purposes.

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1. General

1.1 The standards and requirements in this document are the pre-requisite conditions for the issuance of a Technical Acceptance Certificate (TAC) for FM transmitters operating in the 88 to 108 MHz band to provide a very low power FM broadcasting service to small remote communities.

1.2 Those seeking to obtain a Technical Acceptance Certificate for low power announce transmitters shall, at their own expense, carry out the required tests and send to the Department a certification submission prepared in accordance with *Broadcasting Equipment Standards Procedure 100 (BESP-100)* .

1.3 The certification submission shall include an affidavit, signed by a professional engineer licensed by a provincial association, stating that the equipment meets the technical standards in this document.

1.4 Test results do not have to be submitted to the Department. However, the results shall be kept on file by the applicant and shall be made available to the Department upon request.

1.5 Notwithstanding the fact that a radio apparatus meets all applicable requirements, the Department reserves the right to require that adjustments be made to the equipment should it cause interference.

1.6 Any major design or component changes, other than the replacement of defective components by equivalent parts, will void the approval unless notified to and approved by the Department.

1.7 This document replaces *TRC-54, Issue 2.*

2. Testing and Labelling

2.1 Very low power FM transmitters in the 88 to 107.5 MHz frequency band should be tested according to the methods outlined in *Broadcasting Equipment Technical Standard 6 (BETS-6).*

2.2 The transmitting equipment shall be capable of meeting the standards in this document on each standard FM channel at the rated power output for which it is designed to operate.

2.3 In the event that the equipment fails to function during testing, all tests affected by the failure shall be repeated after the fault has been corrected.

2.4 Each certified broadcasting equipment must display in a conspicuous location:

(a) the manufacturer's name, trade or brand name (if different from the manufacturer's name);

(b) the model identification;

(c) the serial number;

(d) the Technical Acceptance Certificate number;

(e) the name of the certification assignee.

2.5 The identification label must be indelible, tamper-resistant and affixed permanently or stamped in such a manner as not to be removable except by destruction or defacing.

3. Technical Standards and Requirements

Channel Frequency	To conform to standard allotted channels in the FM broadcasting band 88 to 107.5 MHz.
Carrier Frequency Stability	±5 kHz between 15 and 25°C at rated line power input voltage.
Spurious Emissions	Attenuated at least 45 dB below the level of the modulated carrier outside the frequency band starting at ±600 kHz separation from carrier.
Audio Frequency Response	±3 dB from 100 Hz to 10 kHz using standard 75 microseconds pre-emphasis.
Audio Frequency Harmonic Distortion	3% from 100 Hz to 10 kHz at a modulation deviation of ±35 kHz.