



TRC-53
Issue 2
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Spectrum Management

Telecommunications Regulation Circular

Recommended Minimum Technical Requirements for Television Broadcasting Transmitters for Use in Small Remote Communities

Purpose

This Telecommunications Regulation Circular outlines the recommended minimum technical requirements for television transmitting equipment operating in 54 to 88 MHz, 174 to 216 MHz and 470 to 806 MHz bands to provide a very low power TV broadcasting service to small remote communities in accordance with Broadcast Procedure 15 (BP-15).

Technical Requirements

The recommended minimum technical requirements for very low power TV transmitting equipment are as follows (for definitions and methods of test refer to Radio Standards Specification 151 (RSS-151):

Visual

Visual Power Output Rating	VHF: Up to 2 watts maximum (peak envelope power). UHF: Up to 10 watts maximum (peak envelope power).
Channel Frequency	To conform to standard allotted channels.
Carrier Frequency Stability	Plus or minus 5 kHz between 15 and 25 degrees C at rated line power input voltage.
Spurious Emissions and Intermodulation	All spurious and intermodulation products shall be attenuated at least 40 dB except those intermodulation products at -4.5 MHz and +9.0 MHz, with respect to visual carrier, shall be at least 30 dB below the rated power output.
Group Delay	The group delay should be within ± 120 microsecond of the standard group delay of RSS-151.

Aural

Aural Carrier Output Power	2 to 20 percent of visual power output rating.
Aural Frequency Carrier and Stability	4.5 MHz plus or minus 1500 Hz with respect to video carrier between 15 and 25 degrees C at rated line power input voltage.
Frequency Response	± 3 dB from 100 Hz to 10 kHz using standard 75 microsecond pre-emphasis.

Equipment Verification Procedure

Those* seeking to establish that their equipment meets the minimum recommended technical requirements for very low power TV (VLPTV) transmitters established in accordance with BP-15, shall satisfy the Department at their own expense that the equipment actually meets the requirements contained in this document. An affidavit signed by a person licensed by a Canadian Provincial Association of Professional Engineers is required to satisfy this requirement. The signed affidavit shall state the transmitter make and model number, the tests performed, the person responsible for the tests and a statement that the equipment meets TRC No. 53.

ORIGINAL SIGNED BY
G.R. BEGLEY

G.R. Begley
Director General
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* Normally the equipment manufacturer or supplier