

---

Spectrum Management

Radiocommunication Information Circular

# Radio Station Identification

Radiocommunication Information Circulars are issued for the guidance of those engaged in radiocommunications in Canada. The information contained in these circulars is subject to change without notice. It is therefore suggested that interested persons consult the nearest district office of Industry Canada for additional details. While every reasonable effort has been made to ensure accuracy, no warranty is expressed or implied. As well, these circulars have no status in law. Additional copies of this or other circulars in the series are available from any office of the Department.

Comments and suggestions may be directed to the following address:

Industry Canada  
Radio Regulatory Branch  
300 Slater Street  
Ottawa, Ontario  
K1A 0C8

Attention: DOSP

## **Purpose of RIC**

This document provides licensees of radio stations, other than broadcasting stations, with information on radio station identification policies and procedures.

## **Regulatory Requirement**

The regulatory requirement for each station communicating with other stations to identify itself, is found in section 28 of the *General Radio Regulations, Part II*. This section states, in part, that the station's call sign or, if no call sign has been assigned, the name of the station shall be transmitted at least once in each transmission and at least once every 30 minutes of transmission.

## **Background**

The demand for radio systems has greatly increased in recent years and, consequently, the occurrence of radio frequency interference has also increased. As the identification of the radio stations involved is the first step in solving these interference problems, it is essential that stations be identified in accordance with the current regulations.

For example, malfunctioning equipment can result in a station unknowingly causing interference to stations operating on other frequencies. Proper radio station identification would help to quickly locate the offending transmitter in order to resolve this interference.

## **Call Sign**

All land stations in all services and all mobile stations operating in the aeronautical mobile and maritime mobile services are assigned a call sign. However, since land mobile stations are not assigned a call sign, they should identify using the name of the licensee followed by the mobile's fleet number.

## **Acceptable Methods Which Can Be Used for Identification**

The following two methods can be used to identify a radio station:

1. Manual calling procedure
2. Automatic identification

### **1. Manual Calling Procedure**

One way to identify a station is to incorporate the assigned call sign in the station's calling procedure.

Examples of the calling procedure are:

1. Base station calling a mobile station - "Mobile 2, this is ABC123" (where ABC123 is the call sign assigned to the base station).
2. Mobile station calling the base station - "ABC123, this is Mobile 2".
3. Mobile station calling another mobile station - "Mobile 3, this is ACME Mobile 2" (where ACME Ltd. is the licensee).

When the radio operators are familiar with the correct calling procedure, it can be shortened by dropping the phrase "This is". However, for the abbreviated calling procedure to be effective, **all** radio operators must use the same calling format; the call sign of the station being called followed by the call sign of the calling station. Uniformity and consistency in following this procedure will avoid any confusion as to who is being called.

## 2. Automatic Identification

Incorporating the call sign in the radio operator's calling procedure is an effective way of identifying the station. However, this form of identification is not suitable for all users. For example, because of a busy operational environment, a taxi dispatcher may find it impossible to state the station's call sign every time he transmits to a mobile. As well, digital radio systems or repeater stations which automatically relay transmissions between stations do not have radio operators calling other stations.

For stations that do not have a radio operator or for the convenience of radio operators, a form of automatic identification using Morse code can be used which will meet the identification requirements. Devices that will automatically transmit the assigned call sign in Morse code by modulating the transmitter at a lower level than normal transmissions are commercially available. Most of these devices are acceptable to the Department under the current regulations.

Optimum technical characteristics for Morse code identification are:

- (a) a transmission speed of 20 wpm;
- (b) an audio tone of 1 kHz for amplitude modulation; and
- (c) a 1 kHz tone with  $\pm 2$  kHz deviation for frequency and phase modulations.

The addition of automatic identification equipment must not alter the performance of the radio equipment with respect to the *Radio Standards Specification* under which it was approved. No additional radio station licence application or fee is required for the use of automatic identification equipment.

## Data Transmission

Many radio systems now use digital modulation techniques.

Therefore, the Department, together with other administrations, is studying various identification methods for data transmissions. Until a standard is developed and accepted internationally, operators should use voice identification or international Morse code. For stations where no call sign has been assigned, for example, in the case of mobile radios, no identification is required.

## Paging Systems

Simulcast paging systems are permitted to identify their network with a single call sign. However, the system must have a means of selective remote control for each transmitter. This will permit the station operator to quickly identify an offending transmitter should interference occur.

## Exemptions

The Department realizes that voice or Morse code identification may not always be operationally possible, for example, in the case of police emergency response systems, spread spectrum systems, pulse-modulated systems (radar) and ionosonde systems. Such proposals will be evaluated by the Department's regional offices on a case-by-case basis. If an exemption from voice or Morse code identification is granted, it shall be for a specific station or radio system and does not infer that an exemption is granted for any similar station or system operated under different circumstances. In addition, an exemption may be granted for a limited duration and may be revoked if the difficulty for which the exemption was granted is overcome. An exemption from the requirement to meet section 28 of the *General Radio Regulations, Part II*, will be noted on the radio licence.