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Radiocommunication Information Circular

Radio Station Identification

Preface

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.

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1. Intent

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

2. Background

The demand for radio systems has greatly increased in recent years. 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.

3. Regulatory Requirement

The regulatory requirement for each station to identify itself when communicating with other stations is found in section 41 of the *Radiocommunication Regulations*.

The operator of each radio station when communicating with other radio stations shall transmit the assigned call sign at least once during each transmission and at a minimum of once every 30 minutes during continuous transmission. If no call sign has been assigned, the name of the licensee of the radio station will be used.

4. Call Sign

All radio stations require some form of identification during radiocommunications. Although Industry Canada requires that land stations in all services be assigned specific call signs, this is not required for many types of mobile stations. For example, mobile stations operating in the aeronautical mobile and maritime mobile services are often identified only by their respective aircraft or vessel registration numbers. Whereas in the case of mobile stations operating in the land mobile service, most are identified simply by using the name of the licensee, followed by the mobile's fleet number.

5. Acceptable Methods Which Can Be Used for Identification

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

1. manual calling procedure; and
2. automatic identification.

5.1 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 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.

5.2 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/she 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, automatic identification using digitally stored or taped voice messages or Morse code can be used. Devices that will automatically transmit the assigned call sign in Morse code by modulating the transmitter at a lower level than normal 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 transmission speed of 20 wpm;
- an audio tone of 1 kHz for amplitude modulation; and
- a 1 kHz tone with ± 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.

6. Data Transmission

Many radio systems now use digital modulation techniques.

Therefore, Industry Canada, together with other administrations, is studying various identification methods for data transmission. Until a standard is developed and accepted internationally, operators should use manual calling, international Morse code or other methods acceptable to the Department.

7. 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.

8. Exemptions

Voice or Morse code identification may not always be operationally possible, for example, in the case of police emergency response systems, aeronautical operations, spread spectrum systems, pulse-modulated systems (radar) and ionosonde systems. Therefore, certain exemptions are possible. If granted, the exemption shall be for a specific station or radio system. The requirement to meet section 41 of the *Radiocommunication Regulations* will be noted on the radio authorization. By granting an exemption, no inference is being made that an exemption will be granted for any similar station or system. An exemption may be granted for a limited duration and may be revoked.