



**Government
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Department of Communications

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TELECOMMUNICATIONS REGULATION CIRCULAR

**RADIO INTERFERENCE CAUSED
BY
ELECTRIC HEATING PADS**

**JUNE 1, 1976
(REPLACES SII-10-38 OF MAY 1, 1962)**

TELECOMMUNICATION REGULATORY SERVICE

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SUPPRESSION OF INDUCTIVE INTERFERENCE

RADIO INTERFERENCE CAUSED BY ELECTRIC HEATING PADS

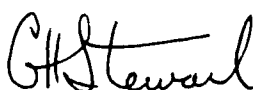
1. Cause of the Interference - Electric heating pads are equipped with thermostats, which regulate the temperature and prevent over-heating. The contacts on the thermostats open and close the circuit, in accordance with the variations in temperature. It is the sparking at these contacts that actually causes the interference. When the contacts become worn and pitted the interference usually is most severe.
2. Description of the Noise - The noise produced in a radio receiver by an interfering heating pad has definite characteristics that are easily recognized. The noise may be described as an intense, hollow-sounding buzz, which usually comes on at regular intervals, although sometimes it may be quite spasmodic. The noise begins at a low pitch and gradually rises to a higher pitch, then suddenly cuts off, recurring again after a short interval, the whole procedure being repeated indefinitely.
3. Test - In order to determine whether or not an electric heating pad is causing radio interference, it is suggested that the following test be carried out by the listener or owner of the heating pad:

If the pad is not already in operation, plug it in, but do not expect the interference to start until the pad has reached normal operating temperature. This may take up to an hour; placing the pad in a blanket will shorten the warming-up period. At the same time, the radio receiver should be placed in normal operation and tuned to a fairly weak signal, not a local station. When the noise is heard on the receiver, immediately disconnect the pad by pulling out the plug, and note whether the noise ceases. This procedure should be repeated a number of times to ensure that some other noise is not responsible. The test should also be repeated with the heat control in different positions. If the noise stops each time the pad is disconnected, it definitely indicates that the pad is causing the interference. Shaking or moving the pad during the test should be avoided, as this will often cause the interference to vary or cease altogether for a certain period.

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4. Cure - If the above test indicates that your heating pad is at fault, action should be taken along the following lines:
- (a) Have the pad repaired. Inquire from your electric appliance dealer where the particular type of warming pad should be sent for repair. No unauthorized person should attempt to make the repairs, as workmanship inferior to the requirements of the Canadian Electrical Code may produce a fire or accident hazard.
 - (b) Use a hot water bottle in place of the pad between 8.00 and 11.30 p.m., local time, until the pad has been repaired.
 - (c) Or replace the pad with a non-interfering pad.
5. Note - Some manufacturers will repair, free of charge, their pads which are found to cause radio interference within a period of one year from date of purchase, provided the pad has not been subject to misuse or tampered with. If not within this period a nominal charge is usually made.
6. Warning - Under the Radio Act, and the Regulations issued thereunder, it is unlawful to cause interference to normal radio reception.

for 
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