

DEFINITION OF INTERFERENCE BETWEEN CO-CHANNEL REPEATER OPERATIONS

1. PURPOSE OF A REPEATER

The purpose of a repeater is to enhance, the range of a mobile within the coverage area.

2. STANDARD MOBILE STATION

The mobile station's transmitted signal does not exceed 25 watts effective radiated power. The mobile station's antenna is located 1.5m above ground level.

3. RADIUS OF PROTECTION

Until the values specified in RC-2: *Guidelines Regarding Analog FM Repeater Coordination*, Section 2, Repeater Specifications, can be confirmed, a fixed area is defined. This area is called the Radius of Protection and is the protected area for mobiles within a repeater's prime coverage area, extending to 40km from the repeater transmitter's antenna location.

4. CO-CHANNEL INTERFERENCE

A mobile operating through a repeater and within the Radius of Protection of that repeater should not access any other repeater on the same frequency, provided normal propagation conditions exist and the mobile is not operating from a hilltop, escarpment or other high point of land. Failure to meet this criterion constitutes co-channel interference.

A mobile that accesses any co-channel repeater while operating outside the Radius of Protection of all co-channel repeaters does not meet the criterion for co-channel interference.

While operating within the Radius of Protection of a repeater, reception of other repeaters on the same frequency does not constitute co-channel interference.

5. FIXED STATIONS

A fixed station operating through a repeater does not meet the co-channel interference criterion. A fixed station should use a low sidelobe level, directional antenna pointed at the repeater and the minimum power level necessary to maintain clear communications through the desired repeater. Fixed stations should avoid communications through distant repeaters on frequencies which support a local repeater.

6. MOBILE AND FIXED STATION OPERATOR'S RESPONSIBILITY

It is the responsibility of the mobile or fixed station's operator to ensure that their transmissions do not interfere with other co-channel communications.

7. REPEATER OPERATOR'S RESPONSIBILITY

To maintain the *Spirit of Cooperation*, repeater users should be informed of operating conditions which may cause unintentional interference to co-channel operations.

8. ENHANCED PROPAGATION CONDITIONS

It should be understood that during enhanced propagation conditions signals will be substantially stronger than during normal propagation periods. These periods may last several days during the summer months. It is quite possible that during enhanced propagation, distant co-channel repeater transmitters may be stronger than the local repeater transmitter at some locations within the local repeater's coverage area.