

Federal Communications Commission,
7435 Oakland Mills Road,
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21046
USA

Maximum Permissible Exposure (MPE) Compliance Statement For Multitone RPE673 Radio Paging Transcoder

The Multitone RPE673 Radio Paging Transcoder (447-470MHz) equipment, contains a low power (2.5 Watts) transmitter and is intended for use with a "local" unity gain (or less) helical, or whip antenna. The equipment's performance may be characterized in accordance with the MPE requirements of 47 CFR, as below.

At the RPE 673's maximum rated operating frequency of 470MHz, the MPE limit for the General Population/Uncontrolled Exposure is $0.3\text{mW}/\text{cm}^2$. The RPE 673 may be shown to comply with this limit, at a line of sight distance of <26cm from the antenna element.

Derivative analysis of this result is as follows:-

For the general uncontrolled population, the Maximum Permissible Exposure (MPE) limit is given by the formula $F/1500 \text{ mW}/\text{cm}^2$, where F is the operating frequency of the product. This equates to a limit of $0.3\text{mW}/\text{cm}^2$.

The prediction method provided, is based the following worst-case (far-field) calculation:-

$$\text{Power Density } (P_D) = \text{EIRP}/(4\pi R^2)$$

Using this formula for the RPE 673 with the following values inserted; $P_D = 0.3\text{mW}/\text{cm}^2$;
EIRP = 2500mW (worst case), yields a radius figure of 25.75cm.

The User Manual, which also incorporates the Installation instructions, includes a warning under the heading "Important Safety Information". This warning instructs the installer to ensure that the unit and it's associated antenna, are mounted in a position where people will not approach, or be located within, 1m of the radiating antenna. This distance provides an additional safety margin for the product.

Dated this 25th Day Of February 2002

Signed:



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