

RF Exposure Compliance Requirement.

Table 1 Of 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population as 1 mW/cm^2 . The distance from the transmitting antenna where the exposure level reaches the maximum permitted level is calculated using the equation:

$$S = (PG)/4\pi R^2$$

Where: S = Power density = 1 mW/cm^2 .
 P = Power input to the antenna = 0 dBm
 G = linear power gain relative to an isotropic antenna = 1 dBi
 R = Distance to the centre of the radiation of the antenna

Solving for S the level is well below the limit at 20 cm from the antenna, approx 0.25 uW/cm sq. . Therefore no warning labels, no RF exposure warnings in the manual or other protection measures are required for the Philips transceiver.

As mentioned previously, Table 1 Of 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population as 1 mW/cm^2 , and the maximum peak power of the Philips unit is approximately 0 dBm (or 1.00 milliwatt) – the highest measured conducted output power is below 0 dBm . The radiating element to be used with this product is a short monopole $\frac{1}{4}$ wavelength antenna with a nominal gain of 1 dBi .

If we consider a situation where the whole RF power output was to be absorbed by 1 gram of tissue, the SAR limit would still not be exceeded. Please note that due to typical RF circuits constraints, the scenario described above is not possible.

Also, if we consider a separation equal or greater than ($\Rightarrow$) 20 cm , then the above mentioned MPE limits are well above the potential maximum 0 dBm (or 1.00 milliwatt) that the Philips unit capable of producing.