

## Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation

Radar Type: RA42C  
FCC ID: O5VRB716A  
Manufacturer: Koden Electronics Co., Ltd

### Reference:

Sec. 1.1310 Radio frequency radiation exposure limits  
Table 1--Limits for Maximum Permissible Exposure (MPE)  
(A) Limits for Occupational/Controlled Exposures  
1500-100,000MHz 5mW/cm<sup>2</sup>

### Calculation:

#### (1) Average Output Power (Pav)

Peak Output Power	4kW (4000W)
Repetition Frequency	600Hz
Pulse Width	0.8 us (0.0000008s)
Average Output Power	= $4000(W) \times 600(Hz) \times 0.0000008(s)$ = 1.92 (W)

Horizontal Beam Width 1.8 deg. (Continuously Rotating with 360 deg.)

Pav =  $1.92 \times 1.8/360$   
= 0.0096 (W)

(2) Antenna Gain (Ga) 28.0dB ( 631 )

(3) Wave Length (Lw) 0.0319 (m)

(4) Power Density Limit (Plim) 50 (W) ; 5mW/cm<sup>2</sup> = 50W/m<sup>2</sup>

**Range of Limits (m)** =  $((Pav \times Ga \times Lw^2) / ((4 \times \pi)^2 \times Plim))$   
=  $((0.0096 \times 631 \times (0.0319)^2) / ((4 \times \pi)^2 \times 50))$   
= **0.00088 (m)**

According to above calculation, this radar is comply with " Sec. 1.1310 Radio frequency radiation exposure limits ".