

## Maximum Permissive Exposure

FCC ID: AK8TAS40RWR

System Name: Home Theatre System [Active Subwoofer: SA-WS40R; Wireless Amplifier: TA-S40RWR]

M/N: HT-S40R

EUT Name: Wireless Amplifier

EUT Model No.: TA-S40RWR

1. According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 Limits for Maximum Permissible Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational / Control Exposures (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	---	---	f/300	6
1500-100,000	---	---	5.0	6
(B) Limits for General Population / Uncontrolled Exposures (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	---	---	f/1500	30
1500-100,000	---	---	1.0	30

### 2. MPE Calculation

**Sony Corporation** declares that the product described above has been evaluated and found to comply with the RF exposure limits for humans, as specified based on ANSI/FCC recommendation.

RF Exposure Calculations:  $S = (P * G) / (4 * \pi * r^2)$  or  $r = \sqrt{(P * G) / (4 * \pi * S)}$

#### 2.1. Estimation Result

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )
GFSK (DTS)	2404	6.642	4.615	2.5	1.78	0.001634
	2440	6.521	4.488	2.5	1.78	0.001589
	2476	6.666	4.641	2.5	1.78	<b>0.001643</b>

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.78 Numerical**, and the highest power output (P) is **4.641mW**, the power density (S) is **0.001643mW/cm<sup>2</sup>**.