

Worksheet B: Instructions — Station Evaluation Worksheet

Provided as a membership service by the American Radio Relay League, Inc., 225 Main St., Newington, CT 06111

If you do have to do a station evaluation for one or more powers or modes, use this worksheet to guide you through the process. This single page worksheet and instructions will suffice for many stations. See Chapter 5 for multiple transmitter sites and repeaters.

A, B. For your records, enter the call sign of the station (A), the station licensee (B) onto the top of the worksheet.

C. Enter the frequency band being evaluated.

D. Enter the operating mode being evaluated.

E. Enter the maximum transmitter peak-envelope power being used on this band (E). (See Chapter 5, the section titled: "How to Calculate Peak Envelope Power to the Antenna.")

F. Enter the peak-envelope power input to the antenna from line L of Worksheet A (F). (As a conservative first estimate, you can skip to steps J and K, using this power level.)

G. Enter the duty factor of the mode being evaluated (H): (See the section in Chapter 5 titled: "Duty Factor," or use 40% for CW, 20-40% for SSB, 100% for FM or digital modes.)

H,I. Enter the maximum percentage of time the station could be on the air for controlled or uncontrolled exposure. (A good rule of thumb is to use 100% for controlled exposure, 67% for uncontrolled exposure. Also see the table in Chapter 5.)

J, K. Calculate average power.

(Multiply the PEP input to the antenna (F) by the duty factor of the mode being used (G) by the operating time percentage (H, I). The result is the average power to the antenna.

L. Refer to any of the evaluation methods described in the FCC's *OET Bulletin 65* of Chapter 5. Determine that the antenna is located far enough away from areas where people are present or that the field strength is below the maximum permissible exposure (MPE) limits in areas where people are present. Describe briefly the method used to perform this evaluation.

M. Record the results of your station evaluation. Your station evaluation for this band and mode is now complete. Although it is not required by FCC rules, it is recommended that you retain a copy of your station evaluation in your station records.

If the station is not in compliance under all circumstances of its expected operation, attach a separate sheet describing any limitations of methods that the station operator will use to ensure compliance if people are present in areas that could be out of compliance.

WORKSHEET B: STATION EVALUATION WORKSHEET

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Use this worksheet for each band, mode and antenna combination you use to determine if your station complies with the FCC regulations for RF exposure.

(A) Station Call Sign: _____ (B) Station Licensee: _____

(C) Frequency Band: _____ (D) Operating mode being evaluated: _____

(E) Maximum Transmitter PEP used on this band: _____ W PEP

(F) PEP input to the antenna on this band (from line (L) on Worksheet A): _____ W PEP

For a conservative estimate, you could use your maximum transmitter PEP and skip to step (L) and use this power for your evaluation. If you "pass," you do not need to do the other steps.

Mode and duty factor:

(D) Operating mode being evaluated: _____ (G) Duty Factor for this mode: _____%

(See Chapter 5 or use 40% for CW, 20% for SSB with no speech processing, 40% for SSB with heavy speech processing, 100% for FM or digital modes)

Maximum time the station could be transmitting in:

(H) 6-min period (controlled): _____ / 6 = _____ %

(I) 30-min period (uncontrolled): _____ / 30 = _____ %

Calculate average power — Controlled exposure:

(F) _____ W PEP × (G) _____ % × (H) _____ % = (J) _____ W avg
PEP input to the times Duty Factor times Controlled equals Controlled average
antenna from (F) from (G) operating time power input to the
percentage antenna

Calculate average power — Uncontrolled exposure:

(F) _____ W PEP × (G) _____ % × (I) _____ % = (K) _____ W avg
PEP input to the times Duty Factor times Uncontrolled equals Uncontrolled average
antenna from (F) from (G) operating time power input to the
percentage antenna

(L) Refer to any of the evaluation methods in FCC's *OET Bulletin 65* or Chapter 5. Determine if the antenna is located far enough away from areas where people are present or that the field strength is below the maximum permissible exposure (MPE) limits, based on the frequency, mode, average power and antenna type being used.

(M) Describe the method used to do the evaluation: _____

Using this method, did your station exceed the FCC RF exposure limits? (Y/N)

Controlled exposure: _____ (Y/N) Uncontrolled exposure: _____ (Y/N)

If the station is not in compliance under all circumstances of its expected operation, attach a separate sheet describing any limitations of methods that the station operator will use to ensure compliance if people are present in areas that could be out of compliance.