

Score Calculation Examples

The following examples illustrate how WRTC 2030 Event Scores are calculated in various scenarios, including outside-QA operations, lower-category score substitution, and Sub-Area normalization.

General Score Calculations

Example 1: Operating Outside an Applicant's Home QA

G4ABC (Home QA: EU #8) operates the CQ WW CW contest from Italy (QA: EU #5). Because the station is physically located in Italy, G4ABC's Event Score is calculated using the Maximum Score from EU #5, not EU #8. The resulting Event Score is credited to G4ABC's Home QA (EU #8) standings, but it counts against their limit of three (3) allowed "Outside-QA" scores.

Example 2: Standard Multi-Operator Calculation

G4ABC has a published score of 3,000,000 points in CQ WPX CW (Value = 950) as an M2 entry (Weighting Factor = 0.85) from EU #8. The Maximum Score in the M2 category in EU #8 is 4,000,000 points. Up to 6 operators at G4ABC may submit this result.

Calculation: $950 \times 0.85 \times (3,000,000 / 4,000,000) = 605.6$ WRTC points

Example 3: Lower-Category Score Substitution (Table 5 Rule)

Using the scenario from Example 2, suppose there was an MS entry (a lower category in Table 5) in EU #8 that achieved a published score of 5,000,000 points. Because the MS score (5,000,000) is higher than the top M2 score (4,000,000), the MS score becomes the new "Maximum Score" denominator for all M2 entrants. G4ABC still uses the M2 Weighting Factor (0.85).

Calculation: $950 \times 0.85 \times (3,000,000 / 5,000,000) = 484.5$ WRTC points

Sub-area Normalization Examples (Table 4)

Sub-Areas ensure that competitors in massive geographic zones are only compared against stations with similar propagation realities.

Example 4: NA #10 (Standard Sub-Area Comparison)

In the ARRL DX SSB Contest (Value = 900 for domestic), **VE1BBB** operates SO LP (WF = 0.90) from Sub-Area 1 (closer to EU). The Maximum Score in Sub-Area 1 is 3,000,000. **VE4AAA** operates SO LP from Sub-Area 2 (a tougher path to EU), where the Maximum Score is 1,500,000.

- VE1BBB scores 2,000,000. *Calculation: $900 \times 0.90 \times (2,000,000 / 3,000,000) = 540.0$ WRTC points*
- VE4AAA scores 1,000,000. *Calculation: $900 \times 0.90 \times (1,000,000 / 1,500,000) = 540.0$ WRTC points*

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Result: Even though VE4AAA's raw contest score is half of VE1BBB's due to propagation disadvantages, the Sub-Area normalization allows both operators to earn the exact same WRTC qualification score.

Example 5: AF #1 (Africa North/West vs. South/East)

In CQ WW CW (Value = 1000), CN8AA operates SO HP (WF = 1.0) from Sub-Area 1 (North/West). The Maximum Score in Sub-Area 1 is 8,000,000. ZS6XYZ operates SO HP from Sub-Area 2 (South/East), where the Maximum Score is 4,000,000.

- CN8AA scores 5,000,000. *Calculation: $1000 \times 1.0 \times (5,000,000 / 8,000,000) = 625.0$ WRTC points*
- ZS6XYZ scores 3,000,000. *Calculation: $1000 \times 1.0 \times (3,000,000 / 4,000,000) = 750.0$ WRTC points*

Example 6: SA #2 (South America North vs. South)

In CQ WPX SSB (Value = 950), HK3A operates SOA LP (WF = 0.90) from Sub-Area 1 (North). The Maximum Score in Sub-Area 1 is 6,000,000. CE3BB operates SOA LP from Sub-Area 2 (South), where the Maximum Score is 5,000,000.

- HK3A scores 6,000,000. *Calculation: $950 \times 0.90 \times (6,000,000 / 6,000,000) = 855.0$ WRTC points*
- CE3BB scores 4,000,000. *Calculation: $950 \times 0.90 \times (4,000,000 / 5,000,000) = 684.0$ WRTC points*

Example 7: EU #1 (North vs. South)

In WAE DX CW (Value = 900 for EU), OH2A operates MS (WF = 0.90) from Sub-Area 1 (North). The Maximum Score in Sub-Area 1 is 4,000,000. YL2B operates MS from Sub-Area 2 (South), where the Maximum Score is 5,000,000.

- OH2A scores 2,000,000. *Calculation: $900 \times 0.90 \times (2,000,000 / 4,000,000) = 405.0$ WRTC points*
- YL2B scores 3,000,000. *Calculation: $900 \times 0.90 \times (3,000,000 / 5,000,000) = 486.0$ WRTC points*

Example 8: NA #1 (W1 vs. W2 vs. W3)

In the IARU HF Championship (Value = 1000), K1AA operates SO HP (WF = 1.0) from Sub-Area 1 (W1). The Maximum Score in Sub-Area 1 is 4,000,000. N3CC operates SO HP from Sub-Area 3 (W3), where the Maximum Score is 2,500,000.

- K1AA scores 3,000,000. *Calculation: $1000 \times 1.0 \times (3,000,000 / 4,000,000) = 750.0$ WRTC points*
- N3CC scores 2,000,000. *Calculation: $1000 \times 1.0 \times (2,000,000 / 2,500,000) = 800.0$ WRTC points*

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Example 9: NA #6 (North vs. South)

In All Asian DX CW (Value = 800 for NA), K7WA operates SO LP (WF = 0.90) from Sub-Area 1 (North - WA/OR/ID/MT/WY). The Maximum Score in Sub-Area 1 is 1,000,000. N7NV operates SO LP from Sub-Area 2 (South - NV/UT/AZ), where the Maximum Score is 800,000.

- K7WA scores 500,000. *Calculation: $800 \times 0.90 \times (500,000 / 1,000,000) = 360.0$ WRTC points*
- N7NV scores 800,000. *Calculation: $800 \times 0.90 \times (800,000 / 800,000) = 720.0$ WRTC points*

Example 10: NA #10 (ARRL DX Exception for KL7)

Because Alaska (KL7) faces unique propagation in the ARRL DX contest compared to the rest of Western Canada, they are separated into their own Sub-Area exclusively for this event. VE6XX operates M2 (WF = 0.85) from Sub-Area 1 (VE4-8, VY1). The Maximum Score is 5,000,000. KL7YY operates M2 from Sub-Area 2 (KL7), where the Maximum Score is 2,000,000.

- VE6XX scores 4,000,000. *Calculation: $900 \times 0.85 \times (4,000,000 / 5,000,000) = 612.0$ WRTC points*
- KL7YY scores 2,000,000. *Calculation: $900 \times 0.85 \times (2,000,000 / 2,000,000) = 765.0$ WRTC points*